Design Considerations and Implications in Post-Mortem Data Management

Anita Marie Tsaasan, University of California, Irvine
Nafiri Kusumakaulika, University of California, Irvine
Jed R.Brubaker, University of California, Irvine

Abstract
We present an interview study on the management of post-mortem data on Facebook. Design considerations for post-mortem social media data management were developed, and their use in the design and development of a prototype system named Epilogue is discussed. Our hope in this paper is to bring awareness to designers who may have the opportunity to improve post-mortem data interactions
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Contact: gilbera1@uci.edu, nkusumak@uci.edu, jed.brubaker@uci.edu

## 1.	Introduction

There are many cultural practices related to death. Some are private, some are public, and today many are increasingly codified online through social media platforms like Facebook. Previous work in online mourning and post-mortem data management provided us a starting place to probe further (Acker & Brubaker, 2014; Arnold, 2013; Brubaker et al., 2013; Getty et al., 2011, Graves, 2009; Maciel & Pereira, 2012; Massimi & Baecker, 2010 & 2011; Micklitz et al., 2013; Odom et al., 2010). For our study we examined the personal and community practices experienced through 20 Facebook Friend's post-mortem interactions with the deceased's account data.

Social media platforms typically privilege the account holder, however, data is connected to and actively used by many others after the originator dies. As part of an ongoing design investigation around post-mortem data, in this poster we present design considerations inductively derived from in-depth interviews with Facebook account holders who reported experiencing the death of a Facebook friend within the past two years. We then describe how we are developing these considerations in our prototype system named "Epilogue".

## 2.	Method

We interviewed Facebook users who experienced the death of a Facebook Friend in the past 2 years. We interviewed 20 participants (half women/men), age 20-50 (M=30.9, SD=10), from across the United States. The interviews were conducted by all three authors and ranged in length from 1-3 hours. Half of the interviews utilized remote video communication (i.e., Skype or Google Hangouts), and half were split between in-person (5) and voice call only (5). The interview began with demographic and open-ended experiential questions related to their post-mortem data interaction(s). We then provoked design feedback through paper prototypes proposing an application to transfer login credentials for the deceased Facebook user's account. Participants provided feedback projecting themselves into the realistic situation of receiving the deceased's Facebook user credentials. The final interview section asked participants to share their personal post-mortem data management preferences.

Based on these interviews, we developed design considerations to address concerns and support projected post-mortem data use by various members within the deceased's network. We then developed a system with participant focused features based on the design implications.

## 3.	Design Considerations

Post-mortem data management is inherently complicated by the absence of the deceased. Privileges around online data use are still being defined, particularly in social networked spaces. The individuals and groups who consider themselves entitled to access to post-mortem data can vary widely, as can their wishes for and use of the data. Designers need to pay thoughtful consideration to the complex issues involved with post-mortem data needs.

3.1 Preserving Data

Systems engaging with post-mortem data should make deliberate decisions about long-term preservation. Participants in our study considered access to data beyond the foreseeable future. They found that referencing images and stories from the past was a priority for themselves and others within the deceased's extended social network. These users consider long-term post-mortem social media data storage important to preserving the deceased's identity in the undetermined future

3.2 Flexibility of use

In addition to content preservation, designers should also preserve flexibility for unforeseen future use. Our participants specifically prioritized maintaining higher-quality content and making content exportable. People may use post-mortem data in numerous ways: some to address cultural expectations like public funerals, and others unanticipated. Where previously a 1"x1" image amongst a dozen in Facebook's photo album was sufficient, participants reported many different ways post-mortem data was used on and off-line, both on Facebook, as well as other memorial spaces they created.

3.3 Stewardship

When post-mortem data persists it needs to be managed and cared for. Designers should make deliberate decisions around the stewardship of this data. Stewardship involves managing another's data. On Facebook, Facebook acts as the de-facto steward, maintaining and making decisions related to post-mortem data management for the community. However, in our previous research, we have documented the need for designing human stewardship (Brubaker et al, 2014). When participants described stewardship responsibilities on Facebook, they described attending to the needs of the bereaved community as well as the data. Stewardship may not stop with data storage, but also extend to the context in which that data is preserved and used.

3.4 Competing Needs

Managing post-mortem social media data involves weighing the deceased's perceived desires and the needs within the deceased's faceted social network. When talking about managing another's Facebook account post-mortem, participants shared concerns about the needs of a) the identity of the deceased, b) the many subsets within the social network, and c) individual's tasked with stewarding a post-mortem account. Designers should consider the needs of the various people connected to the data, be aware of the ways that their designs may privileges some individuals over others, and make conscious decisions about how to weigh their competing needs.

3.5 Temporality

Servers, software systems, and the people using them, have limited life spans. Designers should carefully consider the end-of-use for their systems and how users and use change over time. When discussing stewarding data, participants were concerned about what happened to the deceased's data when they die or when Facebook as a platform "dies." In addition to short term needs for sharing content in coordination with in person public memorials, participants discussed ways that data could be passed from generation to generation along with ancestry information. An explicit exit plan is important, figuratively and pragmatically, for any post-mortem data system.

4.   Prototype

Epilogue is a web application that allows a small group of friends to create and curate a memorial for their deceased friend or family member using Facebook data relevant to that specific group of friends. The system creates a private place for users to collaborate with others in personalizing an online memorial for their particular relationship to and memory of the deceased. In what follows, we articulate how the design considerations listed above influenced the design and development of our prototype

4.1 Data Preservation: Epilogue is a separate system from Facebook. Post-mortem data is stored on Epilogue servers and can be downloaded by users to their local storage system(s). Changes to Facebook will not influence the memorial once it is established.

4.2 Flexibility of Use: Facebook is a relatively public social media place where accounts are designed to be a single point for a user's faceted identity. This implies after death, many disparate communities within

a person's friend network may use a data subset. Epilogue recognizes different communities have different needs and provides private places where many groups within the deceased user's social network can create customized memorials which best serve their particular post-mortem data needs.

In our designs we anticipated that multiple memorials for the same person might be created, and even that a single user might participate in personalizing multiple memorials. Each memorial is different based on the particular group's membership. Initially the system suggests a subset of the deceased's data based on the user group, after which group members can continue to curate the data to their likes and needs.

4.3 Stewardship via shared community management: We adopted a communal approach to stewardship in the design of Epilogue. Through Epilogue, users can invite friends and family to collaborate within a private space where they co-create a memorial to suit their unique needs. The post-mortem data management role is shared within the community with features available equally to all members. Membership can change over time, allowing responsibilities to be passed on as the individuals within the community change and their needs evolve.

4.4 Competing Needs: By creating a separate system, Epilogue sidesteps many issues raised by study participants related to managing a deceased's Facebook account identity. Rather than managing a singular Facebook profile and navigating the risks associated with "speaking for the dead" (Brubaker et al, 2013), Epilogue is a private space in which individuals can curate a personal memorial based on a subset of the deceased's post-mortem data. In this way, different user groups can meet their own needs within their own data set without infringing on the other communities' needs within the deceased's broader social network.

4.5 Temporality: An exit strategy for the system is addressed by the inclusion of export features allowing users to download, print content, or export to an external application to create bound books. For the system users, the data management evolves through time, maybe even generations, as the membership to the private community evolves. System users are able to re-purpose the data to suit their individual needs over time.

5.   Future Work

We are currently developing the Epilogue web application. We will solicit feedback from our original study participants and others on our designs to better understand where we have met their needs, as well as opportunities for future improvement. After a functional prototype is complete, a more formal usability study will be conducted in which we invite groups to use the system to develop a memorial. Their input will be used to iterate over the design and then open the application to the public.

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