
The Afterlife of Digital Identity

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Abstract

The death of a user challenges many of the assumptions we hold for social network sites, social media, and digital identity architecture. Death provides a natural breaching experiment that violates core design assumptions about the relationship between users, their accounts, and related data. By studying death in the context of social media, my work aims to understand how people interact with and experience digital identity systems. It demonstrates limitations and provides insight into how social computing systems can better support the entirety of our lives – including when those lives come to an end.

Keywords

death; digital identity; social media; social network sites; digital legacy; stewardship; Facebook; MySpace

ACM Classification Keywords

H.5.3. [Information Interfaces and Presentation]: Group and Organization Interfaces; K.4.2 [Computers and Society]: Social Issues

Death & the Social Network

The mass adoption of social network sites (SNS) has given rise to an increasing number of profiles representing individuals who are no longer alive. In 2012 alone, an estimated 2.89 million Facebook users died (a 42% increase over the estimate for 2011 [4]). However, the death of a user does not necessarily result in the elimination of his or her account nor it's

place inside a network of “friends.” Instead, the unmanaged account continues to exist in a system that is often unaware that the profile owner has died. The continued presence of the deceased, meanwhile, has given rise to online memorializing practices that continue the online lives to the identities these profiles represent.

Death allows us to examine assumptions around the design and implementation of “digital identity”, the relationship between our social identities and their online counterparts, and the role of networks in producing and maintaining our digital identities even after we have died. Using mixed-methods, my dissertation engages the representation of identities that are captured and persist in technological systems that are allowed to speak on their behalf.

Background

Social media platforms create new ways of encountering death, grief, and the legacies of people who have passed. However, death remains a largely unmarked category inside social media platforms. As documented in my research thus far [3], survivors often repurpose deceased friends’ profiles into living spaces for memorialization. Survivors post updates, share memories, and engage in other “post-mortem social networking” practices, effectively growing the identity of the deceased.

Recent work in HCI has stressed the importance of considering the user’s entire lifespan in design. Notable projects have focused on the design of digital heirlooms [6] and the development of technologies that support the needs of the bereaved [5], demonstrating concerns around inheritance, grief, and longevity. These

concerns carry over to post-mortem social networking as well. However, SNS profiles are more than digital artifacts and spaces for the bereaved. They are representations of the deceased. Moreover, unlike early cybermemorials [8] or online obituaries that are specifically created by survivors, the SNS profiles were created by the dead while they were alive. As such, the continued presence and use of deceased SNS profiles raises questions around account ownership, profile space stewardship, and who can and should speak for the dead.

As an extreme use-case, death highlights limitations in our digital identity infrastructures. Traditional approaches to digital identity rely on identifiers (often usernames, user IDs, etc.) and associated data to stand-in for an individual. These approaches are inherited from a history of government documentation such as birth certificates and identification cards [7] and become brittle when social media profiles transform into sites of memorialization and serve a new set of users.

In my dissertation, I adopt an infrastructure studies perspective [1] when exploring how users appropriate, troubleshoot, and work around SNS digital identity systems in their attempts to negotiate the continued presence of the dead post-mortem. Investigating social and technical aspects of access, ownership, management, and representation, my research seeks to answer the following questions:

- How does death problematize how digital identity infrastructure renders users?
- In response to death, how do people manage issues of ownership, access, delegation, inter-user

dependencies, and stewardship of accounts and data in social media?

- How can we better conceptualize the relationships between individuals, accounts, and data?
- How can design methods and practices better account for identity throughout one's lifespan and beyond?

Research Design

I use both qualitative and quantitative methods in my work. Across three studies, I will broadly document the phenomenon of post-mortem social networking, explore user experiences of death in these mediated spaces, and the stewardship practices of those who maintain postmortem profiles.

STUDY 1: Post-mortem Social Networking. In an initial investigation of death and social media, I will provide a broad account of the phenomenon. I will conduct a mixed-methods study of the profiles of deceased users and the content left by their friends. I will collect a historical dataset of the profiles of deceased MySpace users and associated comments and posts in order to account for SNS activity during the 3 years following a user's death. This dataset will be analyzed for temporal patterns using descriptive statistics. I will also perform a content analysis of messages posted by survivors in order to identify prominent usage patterns and their impact on the identity represented by the SNS.

STUDY 2: Experiences with Death. Following the large-scale content analysis of MySpace, I will turn to in-depth interviews to better understand the user experience of death in the context of social media. Using a semi-structured protocol, I will solicit experiences, attitudes, and preferences from individuals

reporting encounters with death in SNS. I will specifically focus on their initial experience and reactions, how they interpret post-mortem social networking practices, their relationship to the deceased, how engagement with deceased profiles (if any) fits into their overall SNS practices, and their preferences for the management and presence of death-related content on SNS. Given the large number of social ties SNS enable, I will particularly focus on the nature of the interviewee's relationship with the deceased, how the deceased should be represented online, and how users negotiate conflicting narratives of these deceased.

STUDY 3: Stewarding a Networked Identity. For the final study of my dissertation, I will investigate the ways in which profiles are maintained postmortem in the absence of their owner. Adopting a group perspective, I will consider the multiple, divergent, and potentially conflicting experiences of survivors by conducting in-depth interviews with multiple participants for each deceased profile.

Two types of participants will be interviewed: "stewards", those who log in as the deceased individual and are able to act in their stead; and "network members", those who are connected to the deceased, but do not have access to the deceased individual's account. During steward interviews I will interrogate that way in which they came to be in this role, and the system functionality and practices stewardship involves. Meanwhile, network member interviews will focus on attitudes and practices, despite the limited functionality provided by the SNS. During all interviews, I will explore the relationship between various social

facets of the deceased's social network and how they influence the profile post-mortem.

Dissertation Status

To date, I have completed Studies 1 and 2. During Study 1 I found that users almost exclusively speak to the dead, reinforcing the deceased's ownership of their profile. My results demonstrated practices surrounding issues of authorship and audience, temporal patterns in posting, and continued social networking with the dead [3]. Results from Study 2 suggest that while some find value in being able to communicate with the dead, most participants speak of unexpected and unsettling encounters with the dead via status updates, profile Walls, and Newsfeeds [2]. Facebook has limited ways of identifying what users are dead, but is optimized for broadcasting intimate displays of grief across the loose-ties of the Facebook network. This has dramatically altered the ways in which many people discover and experience the death of their friends.

By CHI 2014, data collection for Study 3 should be completed, and analysis will be underway. As such, the DC comes at an ideal time for feedback on initial findings, and the overall trajectory of my project.

Expected Contributions to HCI

This research will result in three primary contributions: First, this work will expand current theoretical understandings about the relationship between technology and people throughout and beyond their lifespan. Second, this work enables deeper understanding of the opportunities and limitations of current digital identity architectures and technological configurations of "the user" as well as insights into how these systems might be designed better in the future.

Third, this work will improve our understanding of how social media is used during life-transitions and how individual identities, pre and post-mortem, are in actuality shared group identities in large, networked systems. These contributions have the potential to advance the state of the art in both social media and identity management, reaching beyond the systems I am currently studying into other big data systems, large-scale records management systems, and infrastructure for which the lifetime of both the data and the user are important.

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