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Abstract  
Little has been done to investigate how online accounts can be designed to support the end of sharing, while protecting the privacy and security of users. To fill this knowledge gap, we conducted semi-structured interviews with 25 people who previously shared online accounts. Our results suggest that, apart from a romantic breakup there are many other reasons why people stop sharing accounts with each other. There is therefore a need for online accounts to be designed to fit these different social contexts. Participants also had trouble in splitting their shared content after the end of sharing. We suggest design recommendations to accommodate the various ending scenarios.

Author Keywords  
Online, accounts, shared, ending, account sharing

ACM Classification Keywords  
H.5.m [Information interfaces and presentation (e.g., HCI)]: Miscellaneous; See [http://acm.org/about/class/1998]: for full list of ACM classifiers. This section is required.

Introduction  
According to 2017 figures from the Pew Research Center, 41% of adults share their online accounts with friends or family members [1]. A recent report by Country Financial Security Index [2], also indicates that 54% of Americans...
share accounts. More specifically, 3 in 4 share streaming accounts (e.g., Netflix, Hulu), 4 in 10 share mobile plans, and 41% share online shopping accounts (e.g., Amazon Prime). Naturally, the sharing of many of these accounts will not endure forever. However, online accounts are not good at ending sharing [3, 4, 5]. As Moncur et al. suggest [5], while some online accounts encourage sharing, they do not take into consideration users’ privacy and security in ending sharing. Sometimes, users are forced to navigate unnecessary hurdles to stop sharing accounts, or to regain their previously shared content [6, 7]. Ending becomes even more difficult in accounts that were never designed to be shared (for instance, single user shopping accounts). As such were not fashioned to have shared content, stopping the sharing of the accounts may be problematic. Previous work focuses on why people share accounts [8, 9], and how sharing happens [4, 8]. Some studies also investigated the management of digital possessions (such as videos, chat logs, login details, shared accounts, social media posts, and text messages) after a romantic break up [10, 5]. However, to the best of our knowledge, no research focused solely on the various reasons people (in different types of interpersonal relationships) end sharing, and the challenges they face during the ending process. The aim of this study, therefore, is to investigate how account sharing ends, with the goal of investigating issues associated with ending. We conducted semi-structured interviews with 25 participants who stopped sharing at least one online account in the past 12 months. Prior to the interview, participants were involved in various types of interpersonal relationships with those whom they shared accounts (such as friendship, family, romantic, and business relationships). The interviews focused on why sharing ends, how it ends, and what makes the process difficult. We analyzed data using thematic analysis. Preliminary results indicate that people stop sharing accounts for various reasons, such as privacy needs, disagreement, and the loss of trust. We identified that, apart from changing passwords, people use several other methods to cease from sharing. In addition, we identified that the end of sharing does not always indicate the end of an interpersonal relationship (which was not implied in previous studies [5, 11]). Furthermore, when people use ‘change of password’ as a method of ending account sharing, this mostly signifies that the interpersonal relationship between the primary and secondary user(s) has ended. Understanding how and why sharing ends leads to several design directions that can support users in the process of ending.

Related Work
Several recent studies focus on the process of sharing accounts, and the reasons behind sharing, however, there is limited work on the ending of account sharing. While [12, 8] studied the sharing of accounts and devices in households, [13, 4, 14] focused on the sharing practices of devices and accounts in romantic relationships. Similarly, the aim of a more recent study done by Park et al. [9], was to understand the account sharing behaviors of people in romantic relationships, and to contribute to the literature on account and password sharing. The authors carried out a survey on Amazon Mechanical Turk, which included open-ended questions. Their study showed that couples share accounts to meet goals such as convenience, household maintenance, trust, and relationship maintenance. The authors discovered that apart from sharing, some participants were actively hiding the existence of certain accounts from their partners. Park et al., also suggested design recommendations for three relationship stages, the start, maintenance, and end of a relationship. Our research builds on this study, we focus on why people end sharing, how technology supports this process, and what can be done to improve the current technological design. In contrast to [9], we study account sharing not only in the context of romantic rela-
tionships. We further explore the connection between the sharing of accounts and the end of an interpersonal relationship. Many studies [15, 16, 17, 18, 19] investigate how people manage breakups specifically on Facebook, which is beyond the scope of our study. Quan-Haase et al. [20], studied the coping strategies employed by young adults (10 unmarried participants), on Facebook after a romantic breakup. The results indicate that participants were still digitally entangled. For example, because Facebook shows interactions between friends and non-friends, it is possible for participants to still know their ex-partner’s activities, even though they no longer want such information. Haimson et al., [17] further investigated how people decide to announce breakups on Facebook and the impact of their decisions. Similarly, LeFebvre et., [21] studied the dissolution of romantic relationship behaviors in relation to people’s Facebook accounts. The authors explore the behaviors that people engage in on Facebook during and after a relationship breakup, comparing it with Rollie and Duck’s relationship dissolution model [22]. Our work further investigates other types of online shared accounts, explores challenges people experience, and provides recommendations on how people in different types of sharing relationships can be supported when sharing ends. Some studies focus on how digital possessions are managed after break ups. Sas et al., [23] studied how users keep or dispose their digital possessions, in the event of a romantic break up. The authors conducted semi-structured interviews with 24 students, and identified three roles people take in disposing their digital possessions, which are, deleters, keepers, and selective disposers. Similarly, Herron et al. [10] and [5], studied how users manage their digital possessions after a romantic break up, with the goal of informing the design of systems aimed at supporting individuals to disentangle digitally. The digital possessions studied include, videos, chat logs, login details, shared accounts, social media posts, and text messages amongst others. The study was carried out with 13 UK participants (10 females). The authors reported participants’ attitudes after a break up, which included silence on social media, and experiencing bad behaviors from ex-partners. They also found that after the romantic relationship ends, the role of digital possessions changes, as the possessions now acted as a proof that the relationship existed and was over. In terms of how participants managed their digital possessions, the authors report that some participants hid, deleted, or abandoned their possessions, and in some cases, they let the possessions fall into dis-use. In conclusion, the authors recommend the design of ‘outward-facing’ systems, “systems that encourage partners to become digitally entangled, but also prepare to allow partners to separate easily if the relationship does come to an end [10].” Our study continues this work and analyzes other types of relationships. We investigate if the end of sharing always leads to the end of a relationship, and we survey other reasons why sharing ends. We also discuss how ‘outward-facing’ systems can be designed to support users when sharing ends.

**Preliminary Results**

*Why Sharing Ends*

- Loss of Trust between Primary and Secondary Users.
- The Increased Need to Keep Account Activities Private.
- End of Dependence between Primary and Secondary Users.
- Disagreement between Primary and Secondary Users.
- End of Business Relationship.
• Technology Related Reasons.

How Sharing Ends

• Change of Password.
• Delete Account.
• Hope that the Secondary User Logs Out.
• Do Nothing.
• Ask Secondary User to Stop Using the Account.
• Log out of Shared Device/Account.
• Change the Account Type.

Challenges after Sharing Ends

• The Issue with Changing Passwords
• Unable to Manage Shared Content/Account
• Lack of Technical Support

Challenges During Sharing

• Viewing Other Users Content.
• The Problem of trying to Avoid Awkward Conversations.

References


7. Spotify Community. I need to cancel a premium subscription to an account I don't have access to. https:


