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Relationship breakup disclosures and media ideologies on Facebook

Oliver L Haimson
University of California, Irvine, USA

Nazanin Andalibi
Drexel University, USA

Munmun De Choudhury
Georgia Institute of Technology, USA

Gillian R Hayes
University of California, Irvine, USA

Abstract
After relationship breakups, people must make difficult decisions about whether and how to convey this change in a networked environment. To understand and characterize behaviors around breakup disclosures, we analyzed survey responses from 119 US Facebook users who reported experiencing a recent breakup. Using mixed methods, we find that those perceiving Facebook as a more efficient disclosure medium are more likely to announce breakups. We show how media ideologies around Facebook breakup disclosures vary; yet people assume others hold similar beliefs about what is appropriate. We contribute to self-disclosure and online identity literature by identifying two new ways people engage in disclosure and self-presentation on social media: announcements, which highlight how social media can serve as efficient one-to-many disclosure sources, and private status change behaviors, a reflexive means of self-presentation. Understanding breakup disclosures provides insight into designing social media to better enable users to find support during difficult life transitions.

Corresponding author:
Oliver L Haimson, University of California, Irvine, Donald Bren Hall 5042, Irvine, CA 92697, USA.
Email: ohaimson@uci.edu

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Introduction

The end of a major romantic or marital relationship constitutes a life-altering event for many. Following the termination of such a relationship, whether through "breakup" or divorce, people must make difficult decisions about how to disclose this new information, and how to represent their newly single identities. With the pervasiveness of social network sites (SNSs) in people's day-to-day lives, breakup disclosure on these platforms can present unique and additional challenges over the kinds of one-to-one or small group disclosures many people make in person. On SNSs, people must consider an audience consisting of contacts from many different facets of their social networks at once. In this article, we present a study of decisions and behaviors around relationship breakup and divorce disclosures on Facebook. Characterizing and understanding these disclosures informs how SNSs may provision technological support around this life transition. Social media designers need to consider platform features that can enable individuals to share information around challenging, difficult-to-disclose life events, rather than only positive ones.

Ilana Gershon (2010b, 2011a) introduced the concept *media ideologies* to describe the ways that people's beliefs about different types of technology-mediated communication channels explain how they understand the meaning, communicative possibilities and limitations, and appropriate uses of each. As an example, some people considered texting an appropriate method of breaking up with their romantic partner, while many others considered breakup texts highly inappropriate (Gershon, 2011a). When using technologies to communicate during relationships and breakups, many difficulties emerge between partners as a result of a mismatch in media ideologies. There is no consensus on etiquette or appropriate uses of new technologies. However, people assume that there *is* an agreed-upon etiquette and that others share their media ideologies (Gershon, 2011a).

We extend this work by examining media ideologies and social media behaviors as people decide whether and how to disclose the end of a relationship. While Gershon (2010a, 2011a) examined how technology was used primarily for one-to-one communication with a romantic partner *during* relationship breakups, we look at what happens *after* these breakups have occurred, including both one-to-one and one-to-many communication with members of one's network. As such, in addition to contributing to literature on relationship breakups, we bring self-disclosure and life transitions literature to a new context.

Media ideologies around SNS disclosures are highly varied; yet, people seem to assume that they are not. Rather, people tend to believe that others hold the same beliefs about what are and are not appropriate behaviors. Although the concept of media ideologies was developed and is applied here in the context of relationship breakups, it can also be used to understand a variety of SNS information sharing and communication interactions, where people may hold vastly different beliefs around what is and is not appropriate.

In this work, we present the results of a mixed-methods study of Facebook disclosures around the ending of a serious long-term romantic relationship. For the remainder of this article, we use the term "breakup" to refer to all such relationship endings, including divorces, traditional "breakups," and so on. We focus on Facebook because it is currently the most widely used SNS (Greenwood et al., 2016) and because it is a site where people primarily use their physical-world names, identities, and social networks, leading to important insights into disclosure behaviors. We ask, how and why do people disclose relationship breakups on Facebook?

Using qualitative coding and statistical modeling, we analyzed data from an online survey of 119 US Facebook users who reported having experienced a breakup recently. Our findings and contributions include the following:

1. Characterization of breakup disclosures on Facebook through descriptive statistics of survey variables and results of inductive qualitative coding of open-ended survey questions. Results highlight people's disclosure behaviors, perceptions and beliefs about Facebook as a platform for breakup disclosure, and reasons for choosing to disclose or not disclose.
2. Discussion of three participant types that emerged inductively from our data (No Disclosure, Limited Disclosure, and Open Disclosure) and associated media ideologies.
3. Report on factors associated with Facebook disclosure methods. Those who perceive Facebook as a more official or more efficient medium for disclosure are more likely to announce their breakup, while more active Facebook users are more likely to change their relationship status on Facebook.
4. Identification of two new modes of social media disclosures. Extending prior work in which self-disclosures are posited as means of initiating communication with others in one's network (Collins and Miller, 1994; Derlaga and Berg, 2013; Jiang et al., 2011), we instead argue that for many people, disclosure on social media is an efficient means of one-to-many communication that may even circumvent a series of unwanted one-to-one conversations. At the same time, private status changes serve as reflexive, and individual rather than networked, self-presentational behaviors.

A breakup is a major life event that causes stress and anxiety for many (Field et al., 2009). At the same time, disclosure on SNSs can cause added stress during life transitions (Haimson et al., 2015b). Understanding people's decisions and behaviors around breakup disclosures allows important insight that can enable SNS designers to improve user experience around difficult, sensitive, and stigmatized disclosure more broadly.

Background and related work

We examine breakup disclosures on social media in relation to three bodies of literature: communication technology and breakups, social media and life transitions, and self-disclosure.

Communication technology and breakups

Literature about technology and breakups has focused on three areas: post-breakup surveillance, post-breakup communication and management of co-owned digital possessions, and predictive analytics for breakups. First, work has examined cyber-surveillance of ex-partners after a breakup, finding that people often use Facebook to seek out information about their ex (Fox and Tokunaga, 2015; Lukacs and Quan-Haase, 2015; Tong, 2013). However, surveillance of one's ex increases breakup distress (Lukacs and Quan-Haase, 2015), leading to a cyclical relationship between surveillance and distress. Those who use Facebook to ruminate on their past relationship have more difficulty adjusting after a breakup (Tran and Joormann, 2015). After breakups, because Facebook enables people to view some but not all information about an ex's activities, intensions, and desires, people often behave in suspicious and jealous ways, turning into "selves they do not want to be" (Gershon, 2011b).

Dealing with the complexities of technologically mediated communication and management of digital artifacts after breakups can be challenging. For example, in a performance art piece, designer Caroline Sinders offered to act as a "Social Media Breakup Coordinator" to handle digital breakup frustrations such as unfriending an ex and deleting photos (Larson, 2015; Sinders, n.d.). Although Sinders' (n.d.) service is satirical, it could in fact be useful for many; shared digital artifacts hold much emotional value and are difficult to divide and curate post-breakup (Herron et al., 2016; Moncur et al., 2016). Sas and Whittaker (2013) argued for the value of digital forgetting by examining the difficulties of managing and disposing of photos, mutual friends, and relationship status markers on SNSs.

Finally, predictive analytics can help understand and predict breakups on SNSs, such as through the partners' network structure (Backstrom and Kleinberg, 2014) and Twitter activity (Garimella et al., 2014). However, purely quantitative approaches like these do not uncover *why* specific activities on social media platforms predict breakups.

The work presented in this article contributes scholarly knowledge related to the decisions and behaviors around breakup disclosures on SNSs. Moncur et al. (2016) examined breakup disclosures as part of a larger study on technology use during breakups and found that people use SNSs to spread information about a breakup but are often conflicted about the persistent and public nature of such announcements. We build on this work and characterize SNS breakup disclosure decisions in depth.

Relationship dissolution decisions result from a complicated combination of factors (Duck, 1982), as do disclosure decisions. Breakups and disclosures are as unique as each relationship and are a continuation of many existing relationship processes (Duck, 1982). Breakups often involve indecision and oscillation and thus can entail avoiding public knowledge of that breakup, at least for some time (Duck, 1982). Duck (1982) detailed four stages of relationship dissolution: the intra-psychic phase, in which a person decides to end a relationship; the dyadic phase, in which partners assess their relationship and decide to repair or dissolve it; the social phase, in which people publicly acknowledge that the relationship is ending; and the grave-dressing phase, in which people craft a personal narrative of the relationship and the breakup, "tidy up the memories associated with it," and attempt to move on. While Tong (2013) posited that Facebook breakup disclosures likely happen during the grave-dressing phase, we find that depending on personal

circumstances, people may also involve Facebook during the social phase or during both or neither. Next, we examine literature around life transitions and social media.

Social media and life transitions

Identity and SNS behaviors shift when people's lives are disrupted by major life events. Social computing literature on life transitions has examined how people use social media when transitioning to college (Ellison et al., 2007), after childbirth (De Choudhury et al., 2013), when experiencing the death of a loved one (Brubaker et al., 2013; Massimi et al., 2012), and during gender transition (Haimson et al., 2015a, 2015b). De Choudhury and Massimi (2015) examined behavioral changes around engagement announcements on Twitter and found that such announcements were often followed by an increase in content, excitement, and linguistic markers of shared identity. This led us to wonder how SNS behaviors may change in relationship breakups, a similar but juxtaposed life transition. Because life transitions often require disclosures, we next turn to a discussion of research on self-disclosure.

Self-disclosure

Previous research has found that negative emotions are more private than positive ones (Rimé et al., 1998), and sharing positive emotions is often considered more appropriate than sharing negative ones (Leary and Kowalski, 1995). In a context like Facebook, people often refrain from sharing difficult or negative experiences (Reinecke and Trepte, 2014; Vitak and Kim, 2014). Sensitive and more emotionally distraught disclosures, then, may be more likely to happen in online spaces that enable pseudonymity or anonymity (Andalibi et al., 2016). People are often reluctant to share negative emotions due to self-presentation concerns (Goffman, 1959), making social media disclosures of negative life events especially difficult. If people do share such experiences, they likely see some value in it.

Changing one's relationship status marker on Facebook may act as a type of lightweight disclosure compared to a breakup announcement. However, if made public, a relationship status change may require further explanation about the breakup to certain network members (Sas and Whittaker, 2013). Self-disclosure can strengthen bonds and build intimacy (Collins and Miller, 1994; Derlaga and Berg, 2013; Jiang et al., 2011) and allow support-seeking (Andalibi et al., 2016, 2017). Yet it is unlikely that people want to build intimacy with and seek support from everyone in their Facebook network; instead, they may just want to spread information quickly. After a breakup, a person may be able to circumvent some one-to-one disclosures by making a breakup announcement that clarifies what sort of support they do, and do not, desire. In this work, we seek to understand some of these complexities around sensitive self-disclosures.

Methods

Data collection: survey

We developed and deployed an online survey aimed at people who recently (within the last year) experienced the end of a serious romantic relationship lasting 6 months or

longer. Self-reported insights into disclosure decisions and behaviors around this life transition allowed us to understand personal and social behaviors (e.g. nondisclosure) and the thought processes behind them that are not always apparent in shared social media data.

Our survey was open to adult Facebook users in the United States for 14 weeks in 2015. Participation was limited to US residents to eliminate confounding effects from different Facebook features available in some countries but not others, or culture-specific differences. Participants were recruited and asked to complete the survey through recruitment materials on relationship breakup and divorce support groups and forums on Facebook and Reddit, and non-SNS relationship and divorce forums and message boards. The authors also shared recruitment materials on their social media profiles and encouraged our networks to share the link.

The survey included Likert-style items as part of validated scales ($N=32$); multiple choice questions, many allowing "other" and a write-in field as a possible response option ($N=14$); lists of possible Facebook or disclosure behaviors ($N=7$); yes/no with other possible response options ($N=7$); short open-ended questions ($N=5$); and longer free-form open-ended questions ($N=13$; see Appendix 1). A subset of questions was shown only to those who reported having announced (i.e. posted a status update about) their breakup. The survey included questions about methods used to disclose a breakup on Facebook as well as through other channels and face-to-face settings, strategies for managing digital artifacts that included one's previous romantic partner, network management strategies (e.g. unfriending people and making content visible to only some people), behaviors around the "relationship status" marker on Facebook, support received after disclosure, and demographics. Additionally, we used two validated scales: Ellison et al.'s (2007) Facebook intensity scale, which is a comprehensive measure of Facebook usage, and Field et al.'s (2009) breakup distress scale, which identifies grief related to the loss of a former romantic partner.

Our survey asked participants to think about what can be a sensitive topic, potentially resurfacing feelings of hurt and loss. Thus, under the guidance of our institutional review board, at the end of the survey, we provided a list of resources for counseling referrals and crisis hotlines. The insights from this study can influence SNS design to help people better manage disclosures of sensitive life events such as relationship breakups, and this benefit should outweigh the potential risk of temporary psychological discomfort for participants.

Participant data

Our sample included 119 participants. In total, 270 people started the survey, but 74 were disqualified because they did not meet the inclusion criteria (ending a relationship of 6 months or longer within the last year). An additional 69 people exited the survey before completing. We removed data from five people who finished the survey too quickly (<5 minutes) and three people who failed "trap" questions included in the survey to eliminate people who were not paying attention or who were answering too quickly. Excluding one extreme outlier, on average, the survey took 36 minutes to complete (standard deviation [*SD*] = 13.90 minutes, range: 5.02–89.07 minutes).

Participants could choose multiple gender and race/ethnicity options, so percentages add to >100%. Participants were 68% women, 29% men, and 4% nonbinary or unspecified

Table 1. Validated scales used in survey instrument.

Scale	*Mean*	*SD*	Minimum	Maximum
Breakup distress (range: 1–4; Field et al., 2009)	2.03	0.69	1.00	3.75
Facebook intensity (range: 1–5; Ellison et al., 2007)	3.52	0.89	1.00	5.00

gender. Our sample was not racially diverse: 86% were white/Caucasian, 9% were Hispanic/Latino, 9% were Asian/Pacific Islander, 2% were American Indian/Native American, 1% were Black/African-American, and 4% identified with another race/ethnicity. The lack of racial diversity may be a result of our partial snowball sampling-based recruitment approach, which can result in demographically homogeneous participant samples (Baltar and Brunet, 2012). The mean age was 32 years ($SD = 8.55$ years, range: 18–54 years).

Characterizing breakup disclosures

Descriptive statistics

We calculated descriptive statistics to characterize participants' responses. Table 1 shows descriptive statistics for the two scales used in this work: breakup distress and Facebook intensity. Table 2 shows how many participants engaged in each disclosure method and account management activities following a breakup.

Qualitative data analysis

Our analysis indicated that experiences disclosing breakups were more varied and complex than could be captured by analyzing the quantitative survey variables alone. Thus, we analyzed responses to all long open-ended questions (see Appendix 1) qualitatively to understand how and why people disclose their breakups on Facebook. Of the survey's 13 optional open-ended questions, seven were shown to all participants (answered by, on average, 53% of participants; mean word count = 18.32), and 6 were shown only to those participants who had announced their breakup on Facebook (answered by, on average, 62% of these participants; mean word count = 22.96).

In total, two authors began by conducting open coding (Corbin and Strauss, 2008) on open-ended responses from 20 randomly selected participants. These authors then met to discuss their results in detail, agreeing on an initial set of themes and codes. Using this initial codebook, we coded another set of data from 20 randomly selected participants, adding new codes as they emerged in the data. After discussing the codes, themes, and their meanings at length, we reached excellent interrater reliability (Cohen's kappa = 0.91). O.L.H. then coded the remaining data.

Qualitative coding results

Table 3 list themes, and codes within each theme from most to least prevalent. We do not report codes with only one or two occurrences in the data. We present this analysis as a

Table 2. Survey responses regarding prevalence of disclosure methods and account management activities following a breakup.

Activity	Percentage who engaged in activity
Facebook disclosure methods	
Changed relationship status	53
Sent private message(s) to friend(s)	46
Announced breakup	12
Shared a photo or status update about a new relationship	5
Non-Facebook disclosure methods	
Telling people in person	93
Texting	66
Phone call(s)	64
Instant message	37
Email	26
Disclosing on other social media sites	8
Management of photos including previous romantic partner	
Left as is	72
Deleted (if possible)	24
Un-tagged self	20
Un-tagged ex	14
Made visible to only certain people in network	8
Downloaded	6
Management of co-tagged status updates, check-ins, or other Facebook content including previous romantic partner	
Left as is	80
Un-tagged self	14
Deleted (if possible)	14
Un-tagged ex	12
Made visible to only certain people in network	5
Management of friends list	
Made some posts visible to only some people in network	23
Unfriended people connected to ex	23
Unfriended ex	20
Unfriended by ex	13
Unfriended people to control disclosure of breakup	5

characterization of breakup disclosures and related behaviors (e.g. friends lists and audience management) on Facebook. Because these codes emerged inductively, and participants were not asked about these behaviors directly, the percentages represent lower bounds of how many people actually may have demonstrated these behaviors. This is an exploratory analysis; we did not know beforehand, for instance, people's reasons for nondisclosure, but this analysis helped us to understand how and why different people report disclosing, or choosing not to disclose, their breakups. We found that the most prominent reason for disclosing one's breakup on Facebook is because this behavior

Table 3. Prevalence of themes and codes in open-ended response data.

Themes Codes	Percentage of participants assigned each code based on open-ended survey responses
Network response	
Support/concern/sympathy	45
Surprise	13
Sadness/disappointment	10
Reasons for disclosure / perceived difference between disclosure on Facebook and disclosure elsewhere	
Facebook as efficient means of mass disclosure	10
Facebook easier	9
Facebook more impersonal	4
Facebook more official	3
Management of friends list	
Unfriended ex's friends	16
Unfriended ex's family	14
Unfriended person romantically interested in ex	4
Changing audience for posts	
Hid posts from ex's family	9
Hid posts from ex	8
Hid posts from ex's friends	8
Made posts viewable only to friends rather than public	3
Changing posting habits	
Posting frequency decrease	16
Posting frequency increase	10
Posting content change: more careful	4
Posting content change: less personal	3
Posting habits more private	3
Posting content change: more emotional	3
Nondisclosure reasons	
Perception of disclosure on Facebook as "tacky"/"trashy"/inappropriate	6
Added drama	3
Consideration of mutual friends with ex	3
Embarrassment	3
Announcement content	
As part of other announcement (e.g. moving)	4
Breakup details	4
Breakup reason	3
Uncategorized codes	
Disclosure of breakup to limited audience on Facebook	10
Mismatch with ex's disclosure behavior	3
Fear of stalking from ex through mutual friends	3

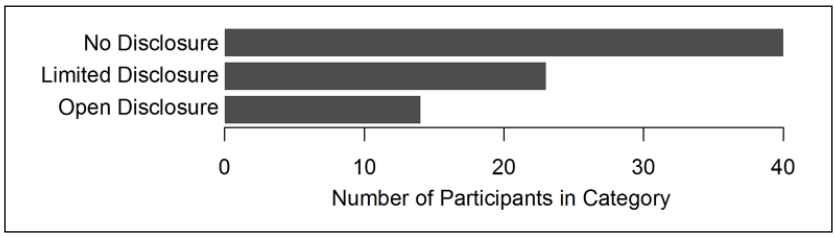

Figure 1. Prevalence of participant types.

allows an efficient means of mass disclosure to one's network. Reasons for nondisclosure included a perception of breakup disclosure on Facebook as "tacky" or "trashy" and wishing to avoid "drama[1]." The behaviors listed in Table 3 highlight the differing media ideologies held by participants. While some described withdrawing from Facebook and limiting their audience to recover from the breakup on their own or by contacting support networks through other means, other people described posting not only a breakup announcement but details and emotional content. Investigating these phenomena in more depth and detail is an area for future research.

Participant types and attitudes towards disclosure

Based on disclosure strategies and attitudes, three participant categories emerged inductively from the data (see Figure 1). These categories emerged through the coding and discussions among the research team, followed by directed coding of each participant's open-ended data, excluding 42 who did not provide enough information to be categorized. We present the two "extreme" categories (No Disclosure and Open Disclosure) first and then describe the category toward the middle of this spectrum (Limited Disclosure).

No disclosure. People who exhibited "No Disclosure" ($N=40$) intentionally chose not to share any information about their breakup on Facebook. Some described breakup disclosures as inappropriate:

> I don't think it is appropriate to disclose your breakup or divorce on Facebook. Many people are simply acquaintances, maybe high school classmates that you never talk to. Better to disclose one on one with people who care about you. (P43)

Others reported disclosing a breakup to be embarrassing or something that would create "drama" with their network. Some were concerned about others' feelings (the ex-partner or mutual friends), and others saw Facebook as a place for positive content and did not "*want to ruin the fun vibes of the platform*." This finding resonates with prior work suggesting "positivity bias" in how people use SNSs (Reinecke and Trepte, 2014). In addition to being unwilling to disclose their own breakup on Facebook, many in the No Disclosure category noted that others also should not post about breakups on Facebook because such behavior is "tacky" or "trashy."

Others in this category never disclosed their relationships on Facebook in the first place, which made a breakup disclosure unnecessary:

> I never posted that she and I had become a couple, and she isn't on Facebook … so I haven't been very vocal about our break up. (P62)

Making a relationship "Facebook official" assumes that both partners are Facebook users and features like relationship status markers privilege linear, monogamous, and long-term relationships (Robards and Lincoln, 2016). Thus, many engage in implicit, rather than explicit, relationship disclosures and may also signal their relationship breakups implicitly, such as by deleting photos (Robards and Lincoln, 2016).

Several participants in this category described more complex disclosure behaviors, such as wanting to disclose but not ($N=2$), and one participant temporarily deactivated her account rather than decide whether and how to disclose her breakup on Facebook.

Open disclosure. A minority of participants ($N=14$) viewed disclosure on Facebook at the other end of the spectrum, as a means to update friends and family members openly about their lives, including breakups. These participants used announcements, status updates, life events, and other methods, using Facebook as a "broadcast service" for the news (Moncur et al., 2016), which was perceived by many as efficient:

> Everyone you know is there, it's efficient. And what else is Facebook for, besides conversing about what is going on in your life with the people you are connected with? And when you're breaking up, what in the world else is in your head? (P20)

Participants in this category varied in their awareness of other people's disapproval of this behavior. This highlights some of the mismatch in media ideologies between different people: people think that their way of using Facebook follows the site's expectations ("*what else is Facebook for …?*"), while others disagree yet think that *they* are the ones following the site's expectations.

Breakup announcements can communicate specific messages to signal emotional status and type of support desired or not, such as[2] "*from a place of healthy transition and love*," "*I'm excited to move forward to my next chapter*," and "*I'm currently looking for a new apartment and roommates—please IM me if you know of anything*." These announcements efficiently communicate how their network can best provide support, while potentially reducing the burden of individual conversations.

Limited disclosure. Participants exhibiting "Limited Disclosure" ($N=23$) did not make a large announcement but shared information subtly (e.g. changing relationship status) or to limited audiences (e.g. by messaging certain friends or by posting an announcement visible only to a small group), such as

> The closest I came to disclosing my breakup publicly on Facebook was an ambiguous status. Other than that I reached individually and directly to friends for support. (P87)

More complex behaviors included self-censoring and creating groups to share content:

> I'm self-censoring myself when it comes to things I think about posting that are related to my newly single status. I want to post about awkward Tinder dates so I created a private group to do so. (P85)

These participants did not necessarily consider communicating a breakup on Facebook to be inappropriate or "tacky." At the same time, they did not feel comfortable enough to disclose their breakup information to their entire network.

Mismatches in disclosure behaviors. Some participants described experiences in which they and their ex-partner employed different disclosure behaviors. For example,

> I never had disclosed my relationship status on Facebook but my ex did and did a public "end of relationship" status. I was so embarrassed. (P58)

Cases like these, in which one partner felt comfortable openly sharing relationship information and the other found such disclosures embarrassing or inappropriate, exemplify the ways that conflicting media ideologies cause tensions around breakup disclosures on Facebook.

Factors associated with breakup disclosures

We performed logistic regression modeling to examine relationships between disclosure behaviors, breakup distress, and Facebook intensity. Regression modeling presents correlational insights, and we refrain from making causal claims from this analysis. While there is no significant relationship between breakup distress and announcing one's breakup, we found two factors significantly associated with announcing a breakup: those who reported perceiving Facebook as a more official medium or a more efficient medium for disclosure are more likely to announce their breakup.

To understand the relationship between breakup distress and breakup announcements, we built a logistic regression model with a binary indicator of announcing one's breakup on Facebook as the outcome variable and breakup distress as an independent variable (see Table 4, Model 1). Control variables included Facebook intensity, gender, time since breakup, and a binary indicator of whether or not the other person initiated the breakup (as opposed to the participant initiating or a mutual breakup). Initially, we controlled for relationship length but removed it because it was highly correlated with age (leading to multicollinearity) and not significant. We did not include race/ethnicity in the regression model due to the small sample sizes for some races/ethnicities. Table 4 shows the odds ratios and 95% confidence intervals for each independent variable. Odds ratios less than one indicate that as the independent variable increases, the outcome variable decreases, while odds ratios greater than one indicate that as the independent variable increases, the outcome variable also increases. In this model, breakup distress had an odds ratio of 0.57, indicating that the greater the breakup distress, the lower the likelihood that a

Table 4. Logistic regression model examining factors associated with announcing breakup on Facebook.

Variable	Model 1: announcing breakup on Facebook		Model 2: announcing breakup on Facebook	
	Odds ratio [95% confidence interval]			
Breakup distress	0.57	[0.19, 1.57]	0.60	[0.09, 3.02]
Perception of Facebook as more official means of disclosure	–		23.81*	[1.00, 508.74]
Perception of Facebook as efficient means of mass disclosure	–		88.57***	[11.38, 1007.83]
Facebook intensity	2.32†	[1.06, 5.93]	1.22	[0.48, 3.75]
Woman	0.44	[0.12, 1.63]	0.37	[0.06, 2.09]
Age	1.06†	[0.99, 1.14]	1.05	[0.95, 1.16]
Time since breakup	1.04	[0.83, 1.28]	0.88	[0.65, 1.17]
Other person initiated breakup	0.96	[0.21, 3.98]	0.54	[0.05, 4.13]
AIC	89.88		64.12	
McFadden's pseudo R^2	0.12		0.46	

AIC: Akaike information criterion.
†$p < .10$; *$p < .05$; **$p < .01$; ***$p < .001$.

person would announce it on Facebook; however, this relationship was not statistically significant. Facebook intensity and age were both marginally significant ($p < .10$) positive predictors; those more active on Facebook and older people may be more likely to make an announcement about their breakup on Facebook. Interestingly, relationship and breakup characteristics like time since breakup and who initiated the breakup had no significant effect on whether or not a person announced their breakup on Facebook, nor did gender. Supporting our qualitative findings, these results indicate that relationship breakup disclosure decisions are more multifaceted than can be captured simply by measuring one's distress concerning the breakup or by looking at the characteristics of the relationship or its dissolution.

To examine some of these complexities, we next asked: Which factors are associated with announcing one's breakup on Facebook? We calculated correlations between several qualitatively coded variables and announcement and found that two were highly correlated with announcing one's breakup: perception of Facebook as more official than other disclosure methods, and perception of Facebook as an efficient means of mass disclosure. These variables had odds ratios of 23.81 and 88.57, respectively, in a logistic regression model (see Table 4, Model 2) with announcing one's breakup on Facebook as the outcome variable and the same control variables as the previous regression. This indicates that as perceptions of Facebook as an official or efficient disclosure method increased, a person was significantly more likely to announce their breakup on Facebook. Model 2 had a much higher pseudo R^2 and a lower Akaike information criterion (AIC) than Model 1, indicating that Model 2 was a better fit for the data. Although high odds ratios are sometimes an indicator of multicollinearity in a model, our model did not exhibit multicollinearity (*Durbin-Watson value* = 2.01, $p = .90$).

Table 5. Logistic regression model examining factors associated with changing one's relationship status on Facebook.

Variable	Model 3: changing relationship status on Facebook	
	Odds ratio [95% confidence interval]	
Breakup distress	0.81	[0.42, 1.54]
Facebook intensity	1.98**	[1.23, 3.35]
Woman	0.44†	[0.17, 1.04]
Age	0.99	[0.94, 1.04]
Time since breakup	1.27**	[1.09, 1.50]
Other person initiated breakup	2.17	[0.86, 5.74]
AIC	159.04	
McFadden's pseudo R^2	0.12	

AIC: Akaike information criterion.
†$p < .10$; *$p < .05$; **$p < .01$; ***$p < .001$.

Model 2's results indicate why some people choose to announce breakups on Facebook, while others do not: Facebook is perceived differently by those with different media ideologies. Some people consider Facebook as a platform where life changes can be efficiently and officially announced and are, therefore, more likely to make an "official" breakup announcement. Facebook provides an efficient means for people to disclose their breakup to many people at once. Talking about difficult life events may be draining. Some may want support and sympathy from their networks; others may not. The form of announcement can signal whether and how people should communicate with the announcer. Thus, one-to-many disclosure can be a way to discourage, rather than encourage, conversations. This complicates existing notions of disclosure as an avenue for opening up discussion with one's network.

We next examined factors associated with changing one's relationship status after a breakup, using a logistic regression model with a binary indicator of changing relationship status on Facebook as the outcome variable (see Table 5, Model 3). Facebook intensity was a significant positive predictor of Facebook relationship status change, with an odds ratio of 1.98. Those who use Facebook in frequent and meaningful ways likely want to update their relationship status to make their profile represent them more accurately.

We did not anticipate some of the more composite ways that people managed relationship status changes and disclosure. Some people changed their relationship status to single, divorced, or another option (53%), while others made this status private (i.e. viewable only to them; 25%). Surprisingly, many people (17% of all participants and almost a third of those who changed status) did both in tandem. Changing one's relationship status and making it private[3] is associated with higher Facebook intensity ($r = .19$, $p = .04$). These results highlight how changing one's relationship status on Facebook is an important self-reflexive behavior, separate from the social aspects of this profile change, particularly for active users. Changing status while making it private is ultimately a gesture for an audience of one, indicating

that accurate self-representation on Facebook is important, yet disclosure may be sensitive or stigmatizing.

Limitations and future work

We limited our sample to US Facebook users. Future research could extend our study to other cultures and SNSs. Our sample was less racially diverse and included a higher percentage of women than the US population and may have exhibited selection bias (as with any survey), potentially limiting the generalizability of our results. Additionally, we included participants who had experienced a breakup within the last year, to increase the sample size of what turned out to be a difficult-to-recruit population. We addressed this variation by controlling for time since breakup in our statistical models.

Due to restrictions on Facebook's API, we did not have access to participants' Facebook data. We mitigated this in part by asking those who announced their breakup to copy and paste their status update text into the survey. Additionally, our survey data give insight that would not be possible through Facebook data alone. Given we found that *not* disclosing one's breakup on Facebook was the most common approach to disclosure management, analyzing participants' open-ended responses allowed us to uncover insight around disclosure decisions that could not have been discerned from a dataset of Facebook status updates. Future work could examine disclosure practices using data from social media platforms directly.

We used a survey to allow participants to reflect on their experiences anonymously, which is especially valuable in sensitive contexts (Suler, 2004). Interviews may allow further insight in future work.

Discussion and conclusion

Breakups are challenging for many, in part because one's network changes at the same time that their identity changes from a coupled to a single person. People show different facets of their identities to different parts of their networks, including difficult self-presentation and disclosure decisions (boyd, 2010), particularly during life changes (Haimson et al., 2015b). Online identities are networked (boyd, 2010) and may be bound up with another person's identity when in a relationship (De Choudhury and Massimi, 2015). At the same time that a person grapples with their new identity as single or divorced rather than in a relationship or married, they must also face network changes such as potential loss of their ex's family and mutual friends during a time when they may most need support.

Decisions and behaviors around breakup disclosures on Facebook are varied and complex. Each announcement (or lack thereof) is unique, and there are few factors that predict whether or not a person will make such an announcement. Similarly, people change their relationship statuses for different reasons and engage in different behaviors around these markers. In short, there are few common behaviors and little agreement over breakup disclosure norms and etiquette on Facebook. Yet, people *believe* that there *are* norms and find it jarring when others break what they consider accepted etiquette. Tensions arise because people with different media ideologies make different disclosure choices, *and* beliefs vary around what is and is not appropriate to disclose.

Social relationships influence attitudes toward technologies (Fulk, 1993), leading to convergence around media ideologies when people are in a relationship. People often discuss and negotiate content that involves others before posting it online (Lampinen et al., 2011). In the context of a relationship, people are often invested in resolving or working around media ideology differences and in effect collaborate on constructing and disclosing digital artifacts as part of a shared identity as a couple (Toma and Choi, 2015). However, when a couple breaks up, the broken social tie can also cause attitudes toward technology to diverge, leading to distress or tension. After a breakup and the loss of shared identity, ex-partners may feel less willing to compromise their media ideologies. Future work could focus on finding ways to design for improving people's experiences when these mismatches occur.

In studying self-disclosure, it is equally important to understand nondisclosure. In this study, we found that the most common approach was to *not* disclose one's breakup. This may vary on different platforms—when given the opportunity to disclose anonymously or using a pseudonym outside of a real name-enforced platform such as Facebook, many may disclose their breakups readily. Our findings that many people consider Facebook an inappropriate venue for breakup disclosures lend insight into why people use particular platforms for sharing particular types of content.

As discussed above, a subset of participants, particularly those with higher Facebook intensity, changed their relationship status after a breakup but at the same time made that status private. This behavior may be the result of incorrect perceptions that changing relationship status would automatically post an update to their network about this change. Until 2013, such a post was generated automatically after a relationship status change to single, complete with a broken heart icon, and was found to be distressing for users; some even went so far as to delete their Facebook profiles rather than change their status to single (Gershon, 2011a). However, although Facebook has changed this feature, the fear of this system-generated, un-deletable breakup disclosure remains for many, which may explain the move to a private status in tandem with changing it to single or divorced.

Private relationship status changes also highlight the reflexive nature of online self-presentation that is often overlooked in favor of networked self-presentation (boyd, 2010). In addition to a networked public (boyd, 2010), Facebook can also serve as a personal and private setting, and online self-presentation is important to people even in cases when no other person sees that presentation. Changing one's relationship status and making it private may be a way for some to process the end of the relationship and consider it a part of the past by not seeing themselves as "in a relationship" anymore on Facebook. Individual self-presentational changes may be part of building what Vitak and Kim (2014) called a "personal record," an emotion-laden online record of life events, with an intended audience of one. Such individual, private self-presentational behaviors may also be a way for people to combat digital persistence. By making particular digital traces invisible to a future audience, people can demarcate the split between their future self and a self that could be inaccurately represented by lingering digital traces (Haimson et al., 2016; Hogan and Quan-Haase, 2010).

In this work, we have highlighted two important modes of social media disclosures that depart from the typical forms of disclosure discussed in prior work (e.g. Collins and

Miller, 1994; Derlaga and Berg, 2013; Jiang et al., 2011). First, disclosures on social media can be an *efficient means of one-to-many communication* that can help people dictate if, and how, they want to discuss difficult life events with their network. Second, some disclosures on social media are a *one-to-self, individual rather than networked, form of self-presentation*. Yet one specific life event, relationship breakups, spans both of these disparate disclosure behaviors. This indicates the extent to which people's varying media ideologies cause them to respond to relationship breakups using Facebook in vastly different ways.

In late 2015, Facebook introduced innovative new features allowing a person to selectively block content from an ex-partner after a breakup and manage co-tagged digital artifacts (Winters, 2015). This is great progress and addresses many of the problems discovered in previous research around surveillance (Lukacs and Quan-Haase, 2015; Tong, 2013) and managing digital artifacts post-breakup (Sas and Whittaker, 2013). However, no feature can fully address the intricacies of breakup disclosures; our work demonstrates that people must make complex decisions about if, how, and when to disclose their breakup to their online social network. Such decisions are unique and depend on a person's beliefs, values, and media ideologies.

After a relationship dissolution, or even during a relationship, one's relationship status marker on Facebook can be sensitive information and thus should be treated as such. During another life transition—gender transition—one's name, profile picture, and gender marker often become sensitive disclosures that may need to be displayed differently to different facets of one's network (Haimson et al., 2016). Employment details may similarly become vulnerable information after one loses a job, or if one works in a stigmatized profession that they may not want known to their entire network. Allowing a person to display their relationship status differently to different subsets of their Facebook network (e.g. close friends can see that a person is Separated, while everyone else still sees "Married") may alleviate some distress around changing that marker. However, managing such complex disclosure features, and requiring users to predict who may or may not be supportive of their breakup or divorce, may compound, rather than alleviate, stress (Haimson et al., 2015b, 2016). Future research should examine usable ways to allow iterative, faceted disclosures on SNSs, which is necessary for a variety of life transitions beyond relationship breakups.

By studying breakup disclosures, we have gained unique insight into how people make themselves known to their networks and manage their social, and self-reflexive, identity presentations during a time of deep personal change. Breakup disclosure decisions and behaviors are unique, but regardless of how one chooses to disclose, those who are distraught can benefit from support from their network after that breakup. The challenge, then, is to design SNSs to enable people to receive the support desired from their networks during sensitive and stigmatized life changes, even for those who prefer limited or no disclosure.

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Notes

1. Marwick and boyd (2014) defined drama as "performative interpersonal conflict that takes place in front of an active, engaged audience, often on social media."
2. Quotes paraphrased to reduce traceability.
3. Changing one's relationship status was a survey question with a binary response variable, as was making one's relationship status private; thus, we quantified whether people did both in tandem.

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Author biographies

Oliver L Haimson is a PhD candidate in the Informatics Department at University of California, Irvine. He conducts social computing research focused on social media, online identity, and gender in the context of life transitions. Through his research, he hopes to impact technological inclusion of marginalized users.

Nazanin Andalibi is a PhD candidate in the College of Computing and Informatics at Drexel University. She examines the ways in which social computing systems can be designed to allow people to disclose stigmatized experiences and seek and provide support in their online social networks.

Munmun De Choudhury is an assistant professor in the School of Interactive Computing at Georgia Tech. Munmun's research interests are in computational social science, with a focus on reasoning about personal and societal well-being from online social footprints.

Gillian R Hayes is the Robert A. and Barbara L. Kleist professor in Informatics in the School of Information and Computer Sciences and in the School of Education and School of Medicine at UC Irvine. Her research interests are in human-computer interaction, ubiquitous computing, assistive and educational technologies, and health informatics.

Appendix 1

Long open-ended survey questions

Open-ended questions listed here were interspersed with non-open-ended survey questions (see section "Methods" for details):

1. How would you describe the response from your Facebook friends when you disclosed your breakup or divorce?
2. How would you compare disclosing your breakup or divorce on Facebook to other ways of disclosing your breakup or divorce?
3. If you "unfriended" people, whom did you "unfriend" and why?
4. If you made some posts visible only to some people, whom did you hide posts from and why? What sorts of posts did you hide?
5. If your Facebook posting habits changed after your breakup or divorce, how did they change?
6. Is there anything else you would like to tell us about disclosing your breakup or divorce on Facebook?
7. Is there anything else you would like to tell us about changing your relationship status on Facebook?

(Questions 8–13 were only shown to those people who announced their breakup on Facebook.)

8. Please copy and paste the breakup or divorce announcement that you posted on Facebook or describe the message.
9. Why did you choose to make a breakup or divorce announcement on Facebook?

10. How would you describe the response from your Facebook friends when you announced your breakup or divorce?
11. Describe any negative reaction(s) you received from Facebook friends following the breakup or divorce.
12. Is there anything else you would like to tell us about announcing your breakup or divorce on Facebook?
13. Is there anything else you would like to tell us about support received from your Facebook friends following your breakup or divorce?