Facebook Use During Relationship Termination: Uncertainty Reduction and Surveillance

Stephanie Tom Tong, PhD

Abstract

Many studies document how individuals use Facebook to meet partners or develop and maintain relationships. Less is known about information-seeking behaviors during the stages of relationship termination. Relational dissolution is a socially embedded activity, and affordances of social network sites offer many advantages in reducing uncertainty after a breakup. A survey collected responses from 110 individuals who use Facebook to gather information about their romantic ex-partners. Results indicated that after breakup, partners may take advantage of the system's information visibility and the relative invisibility of movement depending on relational factors (initiator role and breakup uncertainty), social factors (perceived network approval of Facebook surveillance), and individual privacy concerns. This investigation addresses questions such as what type of information-seeking foci do individuals employ and how do individuals use Facebook as a form of surveillance? What factors motivate surveillance behavior?

Introduction

SINCE THE TERMINATION of relationships is a common experience for many people, several scholars have noted the need for more investigation into the processes and outcomes of these important relational events. Defined as the end of a romantic relationship between two people, early research focused on the antecedents of romantic dissolution.[1] However, more recent work has documented how people manage communication with their ex-partners during or after romantic breakups. Studies have found that individuals use social network Web sites (SNSs) for "electronic interpersonal surveillance,"[2,3] and "Facebook surveillance"[4–6] of ex-partners. Investigations have shown that repeated viewing of an ex-partner in SNSs can negatively impact one's ability to adjust after the breakup,[6] and increase feelings of jealousy and conflict.[5] Although some note that SNS surveillance can be the precursor to more deleterious effects,[7] recent estimates suggest that it is a relatively common practice.[6]

Few studies have provided a generalizable view of motivations to seek information or strategies for doing so that fit with Facebook's affordances. Romantic breakups are not new phenomena, but because relationship dissolution is social in nature—not only dyadic but also such that they involve partners' social networks—and because Facebook maps on to social networks almost isomorphically, Facebook's potential role in the process of breakups seems quite likely. The current research investigates the kinds of information people seek out on Facebook about their ex-partners, and whether this usage is affected by specific social psychological influences.

SNSs in relational termination

Recent studies[3,8] report that people use SNSs to both actively seek out and actively avoid ex-partners during the termination process. In qualitative interviews, some respondents indicated that they completely severed SNS ties with their ex-partners, usually to avoid virtual reminders of former romance. Others engaged in SNS game playing, directly taunting and teasing their ex-partners by crafting messages that they hoped their exes would see. However, some interviewees reported the ability to maintain amicable SNS relationships with ex-partners.

The fact that people use SNSs to directly seek information about ex-partners or avoid them altogether is notable; however, information gathering via SNSs might also involve one's friends. In fact, some scholars suggest that more attention should be paid to how a dyad's social network may impact relational termination (RT) processes.[9] One specific instance of how friends could influence ex-partner surveillance appeared in Gershon's study[3]: "Facebook stalking is something one might confess to one's friends, but only rarely (and even then, generally with some shame) to the person or people being stalked." This suggests that although people engage in Facebook surveillance of ex-partners, they would almost never reveal this to the target or to members of their social

Department of Communication, Wayne State University, Detroit, Michigan.

network. It may be implicitly understood that Facebook stalking is something that everybody does but nobody wants to admit to others that they actually do it.

Relationship termination, uncertainty reduction, and information seeking

As traditionally studied, RT generally involves three to four phases.[10] The first intrapsychic phase occurs when an individual tentatively decides to terminate a relationship. While the intrapsychic phase is often solitary in nature, beyond this stage, the processes are social and may be mediated by technology. The dyadic phase involves reduced interaction between partners or direct discussion of relational dissatisfaction. In the social phase, an individual may gossip about the relationship, create publicly acceptable face-saving versions of the breakup, and interact (or sever ties) with friends in shared social networks. This phase seems particularly prone to support by SNSs, where accounts may be shared among friends and severing ties is done by defriending. A possible fourth phase, grave dressing, involves creating a public version of the relationship's history that justifies its termination.

Much of the research on uncertainty reduction theory[11] (URT) has documented that high levels of uncertainty between romantic partners are correlated with greater feelings of anger, sadness, and fear, and that reduced uncertainty is accompanied by a decrease in the experience of negative emotion.[12] Because any of these phases may create uncertainty, surveillance may occur at any stage, in both long-established and new relationships.[13] Thus, regardless of the specific termination phase, ex-partners should be motivated to reduce uncertainty via SNSs.

Research on URT describes several information-seeking strategies[14] that SNSs can support.[15] Interactive strategies might involve directly asking an ex-partner for information. This may be difficult, however, since individuals often seek separation from ex-partners.[16] More indirect strategies might include questioning third parties, such as mutual friends. Before SNSs, individuals' most efficient strategies had to be interactive. Even questioning mutual friends threatens the ability to save face both for inquirer (potentially giving off the impression that one is "needy" or "desperate") and for the answer provider.[13] In such cases, it may be wiser to remain less embarrassed yet more uncertain. However, SNSs obviate the need for direct, interactive strategies by providing inconspicuous routes for information gathering. Even if an individual is defriended by an ex-partner, because romantic couples tend to be socially linked to the same network ties,[17] information can be covertly gathered through mutual friends.

The current study

Previous research has documented the wide range of communication behaviors that ex-partners engage in on SNSs, but to date, the type of information sought, and the conditions under which surveillance behaviors would be more or less likely to occur have not been investigated. Therefore, the first goal of this study was to uncover whether there are different foci of uncertainty-reduction activities that ex-partners fulfill through Facebook. Because Facebook contains so much information, the type of information people gather may reduce uncertainty in different ways.

RQ1: What types of information do ex-partners seek out about one another on Facebook?

The second goal of this study was to provide a preliminary investigation into the factors that may affect the use of SNSs for ex-partner surveillance and uncertainty reduction. Since breakups are often nonmutual in nature, knowing which partner initiated it is important to establish with regard to surveillance behavior. One study[18] found that when an individual perceives that the ex-partner initiated the breakup, the amount of emotional distress experienced was higher than when the individual initiated the breakup. Thus, when their ex-partners initiate termination, individuals may seek information from Facebook to alleviate greater emotional distress. The amount of RT uncertainty one experiences may also influence SNS surveillance. If an individual did not expect the breakup, he or she may look at an ex-partner's or mutual friends' Facebook activity for more information. Also important is individuals' belief in Facebook's ability to provide specific information about ex-partners—if they believe that Facebook can provide this information, they will be more likely to view it as a legitimate way to reduce RT uncertainty.

Given the social nature of SNSs, if individuals anticipate social disapproval from their friends should their Facebook stalking behaviors become public knowledge, they may be less inclined do so. Of course, if they believe that their network would not care, or maybe even condone such behaviors, this may encourage surveillance.

In addition, individuals must generally view Facebook as an information repository and perceive it as a tool to reduce interpersonal uncertainty. If they do not immediately think of Facebook in this way, they will be less likely to use it for this purpose. Lastly, individual privacy concerns on Facebook are also predicted to impact surveillance behavior: Individuals may want to discourage ex-partners from engaging in reciprocal stalking by using the privacy settings in their own Facebook accounts to isolate themselves. However, if individuals do want to engage in game playing[11] with an ex-partner, they may make their profiles more easily accessible.

Based on the above argument, the following hypotheses are proposed:

H1: Relational factors of initiator role, RT uncertainty, and the perceived utility of Facebook to reduce RT uncertainty predict information seeking about one's ex-partner via SNSs.

H2: Perceptions of social network approval regarding Facebook surveillance predict information seeking about one's ex-partner via SNSs.

H3: Experiential factors of general attitudes toward Facebook's utility as an interpersonal information-seeking tool and general individual Facebook privacy concerns predict information seeking about one's ex-partner via SNSs.

Methods

A sample of 110 participants (79% female) was recruited from communication classes at a midwestern university. After indicating informed consent, respondents completed an online survey designed to measure the factors described above. All items used 1, "strongly disagree," to 5, "strongly agree," scales. To complete the study, respondents must have ended a romantic relationship within 12–18 months of the

data collection. Most of the participants reported that their relationships ended more than 12 months ago (32%), between 8 and 12 months (18.9%), 5 and 8 months (14.4%), 2 and 5 months (21.6%), or less than 2 months ago (12.6%). The sample consisted of Caucasian respondents (75%), African-American (9%), Asian (7.2%), and Other (4.5%); age ranged from 18 to 28 years ($M = 19.62$, $SD = 1.65$). Seventy-seven respondents reported that they still remained Facebook friends with their ex-partner after the breakup.

Facebook information seeking

Fifteen items were modified from the Interpersonal Electronic Surveillance Scale for SNSs,[2] which asked users about Facebook information-seeking activities regarding current romantic partners. The word "partner" in the original items was replaced with "Ex" in the current items. Nine original items assessed other specific topics that the literature[4–6] made salient.

Predictor variables

Breakup initiation. A single item asked participants to identify if they initiated the breakup, or if their ex-partners were responsible. This categorical item was dummy-coded and entered into the analyses.

RT uncertainty. Eight original items ($α = 0.90$) assessed prior awareness of the impending breakup and level of RT uncertainty ("I could anticipate that the relationship was coming to an end").

Perceived utility of Facebook for RT uncertainty reduction. The scale included five items ("Keeping track of my ex's Facebook comments reduces my uncertainty"; $α = 0.90$) to assess how useful respondents believed that Facebook was for reducing RT uncertainty. The generation of these items followed techniques accompanying the theory of reasoned action (TRA),[19] which indicates that behavioral intentions are partially determined by a variety of beliefs about the utility of actions in accomplishing some goal. Therefore, a number of items asked respondents to indicate how strongly they believed that various actions would reduce uncertainty. Higher scores indicated greater perceived utility.

Perceived social network approval. This seven-item scale was adapted using TRA techniques related to subjective norms ("My friends approve of me using Facebook to see what's new in my Ex's life"; $α = 0.77$). Higher scores indicated greater perceived network approval.

TABLE 1. ITEMS, FACTORS, AND FACTOR LOADINGS MEASURING FACEBOOK INFORMATION-SEEKING FOCI

Items	Factor loadings		
	1	2	3
Factor 1: General Social Activity			
I am generally aware of my ex's SNS activities.*	0.831	0.180	0.172
I often spend time looking thru my ex's SNS pictures.*	0.770	0.146	0.254
I peruse my ex's SNS page to see what she/he is up to.*	0.760	0.392	0.096
If there are messages on my ex's wall I don't understand, I try to investigate it through others' SNS.*	0.752	0.345	0.088
I notice when my ex updates his/her SNS page.*	0.750	0.030	0.326
I try to read comments my ex posts on mutual friends' walls.*	0.742	0.215	0.073
I try to monitor my ex's behaviors through his/her SNS page.*	0.727	0.367	0.096
When visiting my ex's SNS page, I read the new posts of his/her friends.*	0.722	0.149	0.285
I know when my ex hasn't updated his/her SNS page in a while.*	0.715	0.338	0.039
I see the friends my ex keeps on his/her SNS page.*	0.675	0.381	0.214
I visit my ex's SNS page often.*	0.671	0.295	0.153
I explore my ex's SNS page to see if there is anything new or exciting.	0.643	0.523	0.046
I am generally aware of the relationship between my ex and his/her SNS friends.*	0.620	0.063	0.170
I often spend time looking thru my ex's SNS videos.	0.618	0.503	−0.143
I know more about my ex's everyday life by looking at his/her SNS page.	0.462	0.300	0.203
Factor 2: Detecting New Romantic Partner			
I look at my ex's relationship status to see if she/he has begun a new relationship with anyone.**	0.317	0.744	0.289
Using Facebook helps me keep up on my ex's life.	0.513	0.691	0.000
Facebook can reveal if my ex has a new romantic interest.**	−0.013	0.673	0.435
I look through my ex's Facebook photos to see if she/he has a new romantic partner.	0.570	0.618	0.048
Using Facebook lets me keep track of my ex's online communications.	0.356	0.563	0.395
FB lets me see what's new in my ex's activities.	0.288	0.528	0.494
Factor 3: Direct Statements			
Facebook is a way for me to communicate directly with my ex.***	0.205	−0.012	0.718
Facebook lets me see what others say to my ex.***	0.225	0.468	0.658
I can use Facebook to see what my ex says to others about our past relationship.***	0.047	0.136	0.561

Asterisks (*, **, or ***) indicate with which factor (1, 2, or 3) the item was retained in further analysis. If no asterisk appears, the item was dropped because of weak primary or strong secondary factor loadings.
SNSs, social network Web sites.

General attitudes regarding Facebook as a tool for interpersonal information. Three original items ($\alpha = 0.82$) ("I use Facebook to find out what other people are doing") assessed individuals' belief that Facebook is useful for gathering information about people in general (i.e., not necessarily one's ex-partner).

Privacy concerns on Facebook. This factor was measured with four items ("I pay very close attention to my privacy settings"; $\alpha = 0.80$). Higher scores indicated greater concerns for privacy.

Results

Uncertainty reduction foci

RQ1 asked whether there were specific types of information that ex-partners looked for on Facebook to reduce RT uncertainty. To ascertain whether there were discernible clusters of information-seeking foci, the items related to information-seeking uses were subjected to a principle components analysis with Varimax rotation. Criteria for retention included eigenvalues of 1.0 or greater for each factor, primary factor loadings >0.60, no secondary loadings ≥ 0.50, at least two items per factor, and that the factor provided simple interpretation. An initial four-factor solution did not meet all retention criteria; a forced three-factor solution met criteria satisfactorily (Table 1).

The first dimension of general social activity monitoring referred to looking at the ex's profile, photos, and status updates to see what the ex is doing, and if there is anything new or exciting. The second dimension focuses more clearly on detecting an ex-partner's new romantic interests. This activity is conducted specifically through checking the partner's "relationship status" and more generally because "Facebook can reveal if my ex has a new romantic interest." The third focus pertains to direct statements made to, or by the ex-partner, involving the respondent, the ex-partner, or their previous relationship.

Hypothesis tests

Analyses examined whether the various factors identified in the literature bore significant relationships with information seeking using SNSs. The analyses were repeated on each of the three foci of information seeking identified in RQ1. Since the hypotheses did not specify a hierarchy among these factors, standard multiple regression procedures were used.[20]

TABLE 2. SUMMARY OF REGRESSION ANALYSIS OF FACTORS PREDICTING GENERAL ACTIVITY MONITORING VIA SNSs

Factor	B	SE	β	t
Perceived utility of Facebook for ex-partner information seeking	0.30	0.10	0.27	3.02**
General belief in Facebook for interpersonal information seeking	0.31	0.11	0.24	2.73**
Initiator role	−0.49	0.17	−0.25	−2.88**
Perceived social network approval	0.30	0.13	0.21	2.39*

Initiator role dummy coded with partner = 0 and self = 1.
*$p < 0.05$, **$p < 0.01$.

TABLE 3. SUMMARY OF REGRESSION ANALYSIS OF FACTORS PREDICTING EX'S NEW ROMANTIC ACTIVITY

Factor	B	SE	β	t
General belief in Facebook for interpersonal information seeking	0.50	0.11	0.38	4.52**
Perceived utility of Facebook for ex-partner information seeking	0.32	0.10	0.27	3.22**
RT uncertainty	0.22	0.09	0.21	2.56*
Perceived social network approval	0.29	0.13	0.19	2.25*

*$p < 0.05$, **$p < 0.01$.
RT, relational termination.

Ex-partner's general social activities. Table 2 reports the results of the multiple regression analysis of the six factors' relationship to one's likelihood to seek information about an ex-partner's general social activities. The final model contained perceived utility of Facebook for RT uncertainty reduction, initiator role, general use of Facebook as an interpersonal information-seeking tool, and perceived social network approval, F (4, 105) = 9.91, $p < 0.001$, adjusted $R^2 = 0.25$. RT uncertainty ($\beta = 0.08$, $t = 0.79$, $p = 0.43$) and SNS privacy concerns ($\beta = -0.009$, $t = -0.10$, $p = 0.92$) were not significant predictors.

Ex-partners' romantic connections. Table 3 shows that four factors significantly predicted information seeking about an ex-partner's new romantic connections: general use of Facebook as an interpersonal information-seeking tool, perceived utility of Facebook for RT uncertainty reduction, the level of RT uncertainty experienced, and perceived social network approval, F (4, 105) = 15.13, $p < 0.001$, adjusted $R^2 = 0.34$. Two predictors were not included, initiator role ($\beta = -0.09$, $t = -1.04$, $p = 0.30$) and SNS privacy concerns ($\beta = -0.05$, $t = -0.63$, $p = 0.53$).

Direct communication by ex-partner. Table 4 shows three predictors for direct communication with an ex-partner on Facebook: general use of Facebook as an interpersonal information-seeking tool, SNS privacy concerns, and break up initiator role, F (3, 105) = 9.68, $p < 0.001$, adjusted $R^2 = 0.20$. Not entering the model were RT uncertainty ($\beta = -0.02$, $t = 1.93$, $p = 0.84$), perceived utility of Facebook for RT uncertainty reduction ($\beta = 0.17$, $t = 1.93$, $p = 0.056$), and social

TABLE 4. SUMMARY OF REGRESSION ANALYSIS OF FACTORS PREDICTING DIRECT COMMUNICATION WITH EX

Factor	B	SE	β	t
General belief in Facebook for interpersonal information seeking	0.47	0.10	0.42	4.73**
Individual SNS privacy concerns	−0.26	0.09	−0.26	−3.09**
Initiator role	−0.33	0.15	−0.18	2.11*

Initiator role dummy coded with partner = 0 and self = 1.
*$p < 0.05$, **$p < 0.01$.

TABLE 5. CORRELATIONS AMONG FACTORS PREDICTING INFORMATION-SEEKING BEHAVIOR OF EX-PARTNERS ON FACEBOOK

	1	2	3	4	5
1. Social network approval					
2. RT uncertainty	−0.26*				
3. Perceived utility of Facebook for ex-partner information seeking	0.23	−0.16			
4. General belief in Facebook for interpersonal information seeking	0.27	−0.02	−0.27*		
5. Individual SNS privacy concerns	−0.17	0.06	−0.01	0.15	
6. Initiator role	0.17	−0.43**	0.12	0.15	0.03

*$p < 0.05$, **$p < 0.01$.

network approval ($\beta = 0.08$, $t = 0.82$, $p = 0.41$). (See Table 5 for correlations.)

Discussion

This study found that individuals use Facebook to garner information about general or specific forms of uncertainty they experience. Results for RQ1 indicated three specific information foci: ex-partner's general social activities, new romantic partners, or what the ex is explicitly saying to others. Regarding H1, the initiator role was associated with using SNSs to monitor ex-partners' social activity and for direct communication. The association was in the expected direction: Information-seeking behavior was greater when the ex-partner initiated the breakup, as compared with when the respondent initiated it. A breakup initiated by the ex-partner may produce greater uncertainty, prompting more information seeking through both covert and direct strategies. RT uncertainty was positively associated with seeking information about whether one's ex-partner had new romantic connections. It stands to reason that if one has little uncertainty about the breakup—either because the respondent initiated it or because the reasons were clear—one would not wonder about an ex-partner's new romantic interests. The statistical relationship may also indicate that when one is dumped and has no uncertainty or does not care about an ex's new romantic partner, more detailed information seeking may not be warranted or desired. In addition, when individuals' believe in Facebook's utility for RT uncertainty reduction, they are more likely to use it to seek information about ex-partners' social activities, new romantic interests, and for direct communication. H1 was partially supported.

Results for H2 found that perceptions of others' opinions about Facebook surveillance significantly predict information seeking about an ex-partner's social activities and new romantic interests. The present results suggest that surveillance via SNSs is not something that people readily reveal without some concern of social (dis)approval. It cannot be said from these results, however, that all users appreciate the covert surveillance potential in the termination context. The corre-

lationally based analyses indicate that the more the individuals apprehend the social disapproval associated with ex-partner surveillance, the less they engage in the behavior. They either interact directly with the ex-partner (a focus that was not deterred by concerns over network approval), or do not inquire at all. Or, individuals who care less about what others' think may be using Facebook more than those who are concerned with social approval.

Regarding H3, attitude toward Facebook for general interpersonal information seeking was related to collecting information about an ex-partner's social activities and new romantic partners. Additionally, the greater one's own privacy concerns, the less the amount of direct communication one desires with an ex-partner. It makes sense that privacy would play a greater role in interactive strategies in which individuals engage in a more overt (as well as potentially face-threatening) encounter. Although communicating directly with an ex-partner may seem like the most efficient way to reduce uncertainty, those who value their privacy may prefer to use more covert means of surveillance, or resist it entirely.

These findings reinforce the notion that social technologies are important to the entire life cycle of relationships, from formation to dissolution. Results also uncovered that a strong mitigating factor on SNS surveillance is the level of social approval that individuals anticipate from their network. Given this finding, future research may focus more attention on social dynamics of termination and examine how individuals use SNSs to disseminate breakup-related information to their networks. We should expect that people use Facebook to manage others' interpretations about their breakup, consistent with the "grave dressing" phase[10] of termination. Just as SNSs provide "visible signs of connection,"[21] research should explore visible signs of disconnection as well.

Limitations

It should be noted that the current sample was small and mostly female. Previous research[1] has found that women tend to identify a greater number of relational problems that underlie romantic breakups than men do; however, other sex differences are unknown. Second, future research should involve noncollege participants because college provides exceptionally dense networks, sociometrically speaking. As network density affects face needs and conflict management, populations with varying network density should be examined. It is likely that in looser networks, the effects of individuals' concern over social disapproval will differ. Moreover, the utility of learning about an ex-partner through mutual friends' Facebook pages should be lessened.

Author Disclosure Statement

No competing financial interests exist.

References

1. Cupach WR, Metts S. Accounts of relational dissolution: a comparison of marital and non-marital relationships. Communication Monographs 1986; 53:311–334.
2. Tokunaga RS. Social networking site or social surveillance site? Understanding the use of interpersonal electronic

surveillance in romantic relationships. Computers in Human Behavior 2011; 27:705–713.

3. Gershon I. (2010) *The break up 2.0: Disconnecting over new media.* Ithaca, NY: Cornell University Press.

4. Marshall TC, Bejanyan K, Di Castro G, Lee RA. Attachment styles as predictors of Facebook-related jealousy and surveillance in romantic relationships. Personal Relationships 2013; 20:1–22.

5. Lyndon A, Bonds-Raacke J, Cratty AD. College students' Facebook stalking of ex-partners. Cyberpsychology, Behavior, and Social Networking 2011; 14:711–716.

6. Marshall TC. Facebook surveillance of former romantic partners: associations with postbreakup recovery and personal growth. Cyberpsychology, Behavior, and Social Networking 2012; 15:521–526.

7. Spitzberg BH, Hoobler G. Cyberstalking and the psychologies of interpersonal terrorism. New Media & Society 2002; 4:67–88.

8. Lee A, Bruckman A. (2007) Judging you by the company you keep: dating on social networking sites. In *Proceedings of Group 2007.* New York: ACM Press, pp. 371–378.

9. Felmlee DH, Spreecher S. (2007) Love. In Stets JE, Turner JH, eds. *Handbook of the sociology of emotions.* New York: Springer, pp. 389–409.

10. Duck S. (1982) *Personal relations 4: dissolving personal relationships.* New York: Academic Press.

11. Berger CR, Calabrese R. Some explorations in initial interaction and beyond: toward a developmental theory of interpersonal communication. Human Communication Research 1975; 1:99–112.

12. Knobloch LK, Miller LE, Carpenter KE. Using the relational turbulence model to understand negative emotion within courtship. Personal Relationships 2007; 14:91–112.

13. Planalp S, Honeycutt JM. Events that increase uncertainty in personal relationships. Human Communication Research 1985; 11:593–604.

14. Berger CR, Kellermann K. (1983) To ask or not to ask: is that a question? In Bostrom R, ed. *Communication yearbook 7.* Beverly Hills, CA: Sage, pp. 342–368.

15. Antheunis ML, Valkenburg PM, Peter J. Getting acquainted through social network sites: testing a model of online uncertainty reduction and social attraction. Computers in Human Behavior 2009; 26:100–109.

16. Altman I, Vinsel A, Brown BB. Dialectical conceptions in social psychology: an application to social penetration and privacy regulation. Advances in Experimental Social Psychology 1981; 15:107–160.

17. Parks MR. (2007) *Personal relationships and personal networks.* Mahwah, NJ: Lawrence Erlbaum Associates.

18. Spreecher S, Felmlee D, Metts S, et al. Factors associated with distress following the breakup of a close relationship. Journal of Social and Personal Relationships 1998; 15:791–809.

19. Fishbein M, Ajzen I. (1975) *Belief, attitude, intention, and behavior: an introduction to theory and research.* Reading, MA: Addison-Wesley.

20. Cohen J, Cohen P, West SG, Aiken LS. (2003) *Applied multiple regression/correlation analyses for the behavioral sciences.* 3rd ed. Mahwah, NJ: Lawrence Erlbaum Associates.

21. Donath J, boyd dm. Public displays of connection. BT Technology Journal 2004; 22:71–82.

Address correspondence to:
Dr. Stephanie Tom Tong
Department of Communication
Wayne State University
569 Manoogian Hall
Detroit, MI 48201

E-mail: stephanie.tong@wayne.edu