

ORIGINAL ARTICLE

Self-Disclosure in Social Media: Extending the Functional Approach to Disclosure Motivations and Characteristics on Social Network Sites¹

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This article introduces the functional model of self-disclosure on social network sites by integrating a functional theory of self-disclosure and research on audience representations as situational cues for activating interpersonal goals. According to this model, people pursue strategic goals and disclose differently depending on social media affordances, and self-disclosure goals mediate between media affordances and disclosure intimacy. The results of the empirical study examining self-disclosure motivations and characteristics in Facebook status updates, wall posts, and private messaging lend support to this model and provide insights into the motivational drivers of self-disclosure on SNSs, helping to reconcile traditional views on self-disclosure and self-disclosing behaviors in new media contexts.

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Social media technologies have opened new possibilities for sharing personal information with online networks, and millions of people routinely self-disclose personal information on social network sites (SNSs). From expressing deep personal feelings and opinions to documenting mundane details of daily life, this type of public² self-disclosure shared with multiple, diverse, and often ill-defined audiences blurs boundaries between publicness and privacy. It also raises questions about self-disclosure and information control in social media, and what leads people to self-disclose in public communication on SNSs.

This article presents a functional model of self-disclosure in SNSs based on the functional approach to self-disclosure (Derlega & Grzelak, 1979; Omarzu, 2000). According to this model, SNS affordances amplify and make more visible a set of strategic concerns and motivations that shape self-disclosure characteristics. By analyzing the content of self-disclosing posts and messages on one hand, and the goal

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behind these disclosures on the other, this study reveals self-disclosure goals characteristic of different media affordances on SNSs depending on their privacy/publicness and interaction directedness. The results suggest that users of SNSs utilize different social media functions for disclosures with different levels of intimacy, depending on their motives and goals, which help to reconcile traditional views on self-disclosure as selective behavior typically shared in dyadic contexts with public self-disclosure on SNSs.

Public disclosures versus traditional understandings of self-disclosure

Self-disclosure is “the act of revealing personal information to others” (Jourard, 1971, p. 2). It is an intentional act typically communicated through verbal behaviors describing the person, his/her experiences, and feelings (Chelune, 1975). Self-disclosure decisions are guided by a complex dialectics of openness–closedness (Altman, 1975) and the tension of public and private persona management (Westin, 1967). Disclosure fulfills fundamental needs for social connectedness and belonging and is intrinsically rewarding (Tamir & Mitchell, 2012), but it also carries inherent risks of vulnerability and information loss because a discloser gives up some degree of privacy and personal control by sharing information with others (Altman, 1975). Thus, disclosure decisions and strategies reflect a balance of conflicting needs aimed at maximizing strategic rewards and minimizing personal risks (Petronio, 2002).

A common strategy for optimizing the disclosure rewards–risks ratio is to establish a dyadic boundary within which a discloser shares personal information with a trusted recipient (Pearce & Sharp, 1973). Such selective disclosure minimizes a discloser’s vulnerability and personal information risks, while still satisfying the desired goals and motivations. The concept of a dyadic boundary is reflected in classic definitions of self-disclosure, most of which emphasize a closed context of self-disclosure with carefully selected others (Jourard, 1971), such as in dyadic interactions (Cozby, 1973) or a small-group context (Taylor, Wheeler, & Altman, 1973). Alternatively, self-disclosures can occur in interactions with strangers (Albrecht & Adelman, 1987), as documented by the “stranger on the train phenomenon” (Rubin, 1975), provided that a stranger does not have access to the discloser’s social circle and no future interaction is expected. Hence, the classic approach to self-disclosure implies a curvilinear relationship between self-disclosure and the extent of partner knowledge: People are most comfortable sharing intimate disclosures with either a complete stranger or a trusted companion within a dyadic boundary (Pearce & Sharp, 1973). The least disclosure occurs between acquaintances who do not know each other well but anticipate future interaction, and in the presence of uninvolved and uninterested third parties or observers due to increased vulnerability and information control losses (Pearce & Sharp, 1973).

While dyadic models of self-disclosure transfer well from offline to online *dyadic* interactions (e.g., Jiang, Bazarova, & Hancock, 2011, 2013), public self-disclosure on SNSs does not conform to the classic understanding of self-disclosure as behavior confined to a closed, mostly dyadic, interaction system. Although self-disclosures on

SNSs can be shared dyadically or selectively with a certain group of recipients (e.g., via chat, private messaging, or friend lists on Facebook), many of them are publicly shared with a whole network of “friends” or followers, composed of large and diverse audiences, ranging from strangers and distant acquaintances to close friends and family members (Gilbert & Karahalios, 2009). Thus, instead of protecting information within a dyadic context or being inhibited in the presence of uninvolved “third parties,” SNS users broadcast personal information to an entire network, as with a Facebook status update or tweet, or make their dyadic exchanges visible to others in the network, as with a Facebook wall post. Furthermore, SNS users share intimate information (e.g., sexual preference, relational updates, and depressive symptoms) next to peripheral information (e.g., restaurant likes), which is incongruent to the principle of incremental and gradual disclosure that suggests that people start by sharing peripheral information and move to more intimate disclosures as they gain trust in their partner (Altman & Taylor, 1973). In contrast to this principle, a visit to one’s Facebook page may reveal more about a given individual than years of previous acquaintance.

Thus, public self-disclosures seem to contradict conventional notions about self-disclosure based on dyadic exchanges. This discrepancy may come from the fact that challenges of managing disclosure and audiences in social media represent a new kind of self-disclosure behavior. Alternatively, as we argue in this article, the affordances of SNSs amplify and make more visible a set of strategic concerns that have always been present in interpersonal communication, but have often been overlooked by classic self-disclosure research, which has privileged close and intimate relationships over public behaviors and less intimate relationships (see for review Parks, 1982). To uncover a range of strategic concerns and motivations behind self-disclosure, we now turn to the functional theory of self-disclosure (Derlega & Grzelak, 1979; Omarzu, 2000), which we extend to social media, arguing that different social media affordances activate different disclosure goals, which, in turn, shape disclosure intimacy.

Functional approach to self-disclosure

Even prior to SNSs, self-disclosures in public face-to-face situations presented a challenge to disclosure theorists because they seemed to be different from traditionally understood dyadic disclosures. For example, to explain why personality characteristics failed to predict disclosure in self-introductory class speeches, Jourard (1971) proposed the concept of “broadcasting self-disclosure” as being disparate from disclosure to a carefully selected receiver in a dyadic situation (p. 171). Such broadcasting disclosure refers to sharing personal information in a public situation, for example a classroom or an interview. It involves a “public recital of innocuous and uninvolved facts” and presents an “edited” or “packaged” version of the self (Pearce & Sharp, 1973, p. 414). Other disclosure theorists pointed to the role of disclosure goals to account for differences between public and private disclosures: “One possible explanation for the differences across paradigms implies that interview situations have different goals than do dyadic situations” (Miller & Read, 1987, p. 43), with impression management

as a salient goal in broadcasting disclosures, and relational development as a prominent goal in dyadic disclosures.

To understand types of goals and functions that disclosures fulfill in interpersonal situations, Derlega and Grzelak (1979) proposed a functional theory of self-disclosure. According to this theory, disclosure goals or subjective reasons for self-disclosing activate disclosure decision-making process and shape its content. Therefore, "if we wish to understand and predict individuals' self-disclosing behavior, we must identify (and measure) the major sources of value that self-disclosure has for individuals" (p. 176). These sources of value reflect social rewards hoped to attain through self-disclosure, and they fall into five basic categories: social validation, self-expression, relational development, identity clarification, and social control. Social validation disclosure seeks to validate one's self-concept and self-value by increasing social approval, social acceptance, and general liking. Self-expression disclosure helps relieve distress through venting out negative emotions and disclosing problems. Relational development disclosure seeks to increase relational intimacy and closeness with another person. Identity clarification disclosure conveys information about one's identity and defines one's position for self and others. Finally, social control disclosure is used to strategically share information about self in an effort to control social outcomes and resources such as information or social benefits.

Building on Derlega and Grzelak's (1979) theory, Omarzu (2000) proposed a disclosure decision model, which incorporated the role of goals in predicting disclosure characteristics, such as disclosure intimacy or duration. This model positions personality characteristics and situational cues as activators of disclosure goals, since personality traits predispose pursuit of certain disclosure rewards, and situational cues increase accessibility and salience of a disclosure reward. As an example of a situational cue, a romantic setting makes a relational development goal more accessible than an office setting (Omarzu, 2000). Thus, the functional approach based on Derlega and Grzelak's and Omarzu's works proposes a mediation model, according to which situational cues activate disclosure goals, which, in turn, shape disclosure characteristics.

Although situational cues are thought of as activators of disclosure goals, the model proposed by Omarzu (2000) does not account for theoretical mechanisms that underlie the activation process or how situational cues relate to specific disclosure goals. This theoretical limitation may be partly responsible for a largely descriptive analysis of disclosure goals in empirical research based on the functional theory of disclosure (e.g., Lee, Im, & Taylor, 2008; Rosenfield & Kendrick, 1984; Waters & Ackerman, 2011), with considerably less attention paid to how goals shape disclosure behaviors and outcomes. Even less is known about disclosure goals for actual communication behaviors as most disclosure studies relied on self-reported goals in certain contexts or hypothetical situations.

While the functional approach does not explain how situational cues activate disclosure goals, recent work on nonconscious goal activation has accumulated a large

amount of evidence about situational triggers of interpersonal goals, including interaction partners and their representations. According to Fitzsimons and Bargh (2003), representations of interaction partners serve as situational cues that activate different relational goals, and these goals can be either conscious or “operate outside of awareness to influence perception and behavior” (p. 148). Several studies indicate that even without a partner’s physical presence, a reminder of a specific relational partner or simply thinking about him/her is sufficient to trigger a goal unique to a particular relationship or an interpersonal context (see for review Bargh & Williams, 2006).

The results of a study by Rosenfeld and Kendrick (1984) support the role of partner representations in conditioning disclosure goals. Participants in this study were presented with scenarios varying in the degree of situational intimacy and target familiarity, for example, “having dinner at home with your family,” “being introduced to a group of strangers,” or “being alone with your boy or girl friend in his or her home.” Whereas the variations on setting intimacy had little effect on self-reported disclosure goals, partner familiarity was associated with different sets of disclosure goals. Relationship development was the most salient disclosure goal for familiar targets; for unfamiliar targets it was impression management or social validation. Thus, as with other interpersonal goals, partner representations, especially those of familiar versus unfamiliar targets, can trigger different disclosure goals and motivations. Extending this finding to SNSs, the next section integrates the functional approach to self-disclosure with research on audience representations as triggers of interpersonal goals in order to understand changes in strategic goals and motivations arising from different media affordances of SNSs.

Functional model of self-disclosure on SNSs

Media affordances and audiences on SNSs

According to Treem and Leonardi (2012), social media affordances reflect users’ perceptions of media utility in supporting social practices. They define four affordances consistently present in social media, including SNSs: (a) data permanence, (b) communal visibility of social information and communication, (c) message editability, and (d) associations between individuals, as well as between a message and its creator. Because SNSs are a multimedia platform, a more granular approach differentiates further between SNS communication forms by the presence or the degree of affordances that shape a communicative act. For example, Facebook communication forms vary in the degree of communal visibility: Whereas status updates and wall posts are by default visible to everyone who has access to the system, private messages and chats are exchanged in closed, often one-on-one, interactions. Thus, the affordance of visibility differentiates between Facebook communication forms by defining their potential viewers: a selected other(s) for private messaging, the profile owner’s network for status updates, and both a profile owner’s and a receiver’s networks for wall posts. Importantly, audiences for more visible modes (status updates and wall posts) can easily expand beyond nominal or intended targets, leading to poorly defined and “invisible” audiences (boyd, 2008). For example, when a profile owner’s friend comments

on a status update initially restricted to his/her Facebook network, it becomes accessible to members of their networks, thus increasing content exposure and redistribution. Communal visibility of public SNS forms also produces a context collapse of audiences, in which people from different social circles and life periods are collapsed into one network (Marwick & boyd, 2011). Such audience diversity complicates self-presentation and disclosure because disclosers have to address different audience values simultaneously (Krämer & Haferkamp, 2011).

In addition to visibility, SNS forms differ in the degree of interaction directedness; for example, Facebook status updates are not directed at anyone in particular, but private messages and wall posts are directed at a single receiver (Burke, Marlow, & Lento, 2010). Directedness can also influence a message locus, with nondirected messages being more author-centric compared to directed messages (Kramer & Chung, 2011). The distinctions in visibility and directedness between Facebook communication forms have been shown to influence how people perceive and experience interaction, including interpretations of self-disclosure (Bazarova, 2012), social capital gains (Burke et al., 2010), and language use and strategic self-presentation (Bazarova, Taft, Choi, & Cosley, 2013). We further argue that a combination of visibility and directedness affect disclosure motivation due to their role in constructing audience representations on SNSs.

Effects of visibility and directedness on audience representations and disclosure goals

Facing invisible and ill-defined audiences in public forms of SNS communication, people have difficulty in determining who is in their audience and grossly underestimate its size (Bernstein, Bakshy, Burke, & Karrer, 2013). Not knowing their actual audience, they anchor behaviors on perceptions of “imagined” audiences or their mental picture of whom they are communicating with, which is argued to be as powerful as the actual audience in determining psychological experiences and behaviors on SNSs (Litt, 2012). This mental picture is largely based on cues people derive from social media environments (Marwick & boyd, 2011), and we argue that both directedness and visibility affect audience construction on SNSs.

Although heuristics for audience construction are not yet well understood, several studies point out to the role of active or interaction audience in perceptions of imagined audience as people rely on others' posts and likes to determine who is listening to them (Bernstein et al., 2013; Kivran-Swaine & Naaman, 2011). Consistently, Marwick and boyd (2011) argue that users tend to treat potentially limitless audiences as bounded on SNSs, targeting specific audience members even when they distribute a piece of content to a whole network. The concept of targeting becomes especially relevant as we consider directed versus nondirected communication, since wall posts and private messages are targeted at a selected individual, who is often a familiar partner. In contrast, status updates are typically not directed at anyone in particular, involving general others that can refer to an “imaginary interested party,” a “fan base” (Marwick & boyd, 2011, p. 120), a “mass audience” (Schau & Gilly, 2003, p. 391), or a broad network of friends or followers (Hogan, 2010). Since disclosure goals are anchored on

audience representations, a mental representation of a familiar partner versus general others should trigger different disclosure goals. Thus, we expect different disclosure goals for nondirected status updates versus directed wall posts or private messages.

In addition to interaction directedness, visibility is another factor in activating disclosure goals, which differentiates between public wall posts and private messaging, both of which are targeted at an individual receiver. For example, an ethnographic study of blogs suggests that although bloggers imagined friends as their audience, they were also aware of a general public who could view their content (Bortree, 2005). Furthermore, since a wall post invites comments from other network members who can view the exchange, the interaction audience for a wall post can easily expand beyond a targeted receiver, and disclosers are likely to take into account other potential viewers, especially those who are part of their interaction network.

To sum up, SNSs' communication forms suggest different audience representations based on their directedness and visibility, and, therefore, we propose that people pursue different disclosure goals in Facebook status updates, wall posts, and private messages (H1). We further argue that similar to findings on relational development goals for familiar versus nonfamiliar targets in Rosenfeld and Kendrick's (1984) study discussed above, disclosures directed at a familiar other, as via Facebook wall posts and private messaging, are associated with relational development goals more than disclosures directed at general others, as via Facebook status updates (H2). Finally, a combination of directedness and visibility should affect how people pursue social validation goals, with social validation goals expected to be most prominent in public and nondirected status updates, as most similar to the broadcasting disclosure situation described by Jourard (1971), and least salient in private and directed messages. Therefore, we predict that people pursue greater social validation goals in nondirected status updates compared to directed wall posts and private messages (H3a), and that social validation goals are more salient in public wall posts compared to private messages (H3b) because of wall posts' visibility.

Closing the loop: Media affordances, disclosure goals, and disclosure characteristics

The value of disclosure goals lies in their ability to predict and explain self-disclosing behavior (Miller & Read, 1987). According to the functional theory of disclosure, situational cues and disclosure goals jointly predict disclosure characteristics, and disclosure goals mediate between situational cues and disclosing behaviors (Derlega & Grzelak, 1979; Omarzu, 2000). Thus, we now consider how SNSs' communication forms and disclosure goals predict disclosure intimacy.

Although no past studies to our knowledge directly compared disclosure intimacy in private versus public communication forms on SNSs, one study has examined perceived appropriateness of intimate self-disclosures embedded in public and private Facebook contexts (Bazarova, 2012). The findings suggest that there are different expectations of intimacy and norms regarding self-disclosure in public versus private communication, with intimate disclosures shared in public viewed as less appropriate than same disclosures shared privately. Thus, expectations of intimacy and norms are

likely to guide people to be less private and intimate in public than in private Facebook communication.

Furthermore, extending classic principles about dyadic and broadcasting self-disclosures (Jourard, 1971; Pearce & Sharp, 1973) to SNSs, people may feel more secure about disclosing intimate and sensitive information in private messaging due to increased perceived control over disclosure in interactions with a selected target. In contrast, when sharing self-disclosures in visible communication forms with ill-defined audiences, people may exercise increased selectivity over message content by revealing information, which is less private and intimate in their view. In other words, people may compensate for the lack of target control by increased information control and selectivity. The content selectivity is further enhanced by interactions via asynchronous, nonverbal communication channels (Walther, 1996), which enable users to be more selective about what to reveal and what to keep private. Thus, we argue that SNS users can adapt to different affordances by choosing to reveal less intimate and private information via public status updates and wall posts than via private messaging on Facebook (H4). Moreover, in accordance with the functional approach to disclosure, disclosure goals are expected to affect disclosure intimacy (H5), with less intimate disclosures associated with social validation goals compared to other self-disclosure goals, especially the more personally involving relational development goals (H6). Finally, closing the loop, disclosure goals are predicted to mediate between Facebook communication forms and disclosure intimacy (H7).

Method

Participants and procedure

Eighty-one undergraduate students (72.7% female) from a university in the north-eastern United States who had a Facebook profile were recruited to participate in this study, in exchange for extra credit in communication and psychology courses. Twenty-three percent of the participants were freshmen, 25% were sophomores, 39% were juniors, and 13% were seniors. The majority of participants were Caucasians (58.4%), 26% Asians, 7.8% African Americans, 2.6% Hispanics, 1.3% Pacific Islanders, and 3.9% identified themselves as others or did not indicate ethnicity. Participants' ages ranged from 18 to 31 years, with a mean of 20 ($SD = 1.14$). On average, participants had had a Facebook account for 4.5 years, and had between 500 and 1,000 Facebook friends. The majority (50.7%) spent more than an hour on Facebook daily.

After giving consent, each participant was led to an individual room equipped with a desktop computer and Internet connection. Participants were instructed to log on to Facebook and copy and paste the six most recent status updates, wall posts, and private messages they had written and the dates of the messages into a web survey. Overall, participants contributed 1,295 messages. At the time of data collection (the spring of 2011), by default, wall posts were accessible to Facebook friends of both the profile owner and the wall post message poster, whereas status updates were accessible to Facebook friends of the profile owner, and advanced privacy settings, such as custom

friend lists, were not available. The private messaging feature offered by Facebook was similar to e-mail, and did not have the capabilities of instant messaging or chat. The majority (87.8%) of private messages were sent to a single receiver, based on content coding by two independent coders for whether a private message addressed a single receiver versus more than one receiver (e.g., a small group of friends), $\kappa = .93$.

Measures and coding

Measures

For every message they had provided, participants were asked to answer questions about the message goal and its intimacy. The questions about intimacy included three items adapted from Bazarova's (2012) study measured on a 7-point scale: "nonintimate-intimate," "impersonal-personal," and "public-private," $\alpha = .78$. Since private messages were overall longer than status updates and wall posts, we calculated the message length in number of words for each post, and used it as a covariate in all the analyses. Further, since participants shared with us their six most recent messages/posts, we calculated a time span in which they were produced to control for variations in posting frequency.

Disclosure presence coding

As participants answered questions about disclosure intimacy and goal for a message as a whole, each message was treated as a unit for further coding and analyses. Two sets of coding were performed on the data: one for disclosures and the other one for disclosure goals. For both sets of coding, coders were trained together and then performed pilot coding, as recommended by Neuendorf (2002), to verify the reliability of the coding scheme.

Before coding for self-disclosures, invalid statements were removed ($N = 28$), such as messages written by participants' friends instead of themselves. Then, two coders coded all messages for whether the message contained a disclosure or not. Disclosure was defined as "the verbal communication of personal information about one's self" (p. 79), including personal opinions, feelings, and experiences (Chelune, 1975). The intercoder reliability was acceptable, $\kappa = .70$, with differences resolved through discussion between the coders. Most of the disagreements resulted from misunderstanding of the message and clerical problems. Out of the total number of 1,295 messages, 58% contained disclosures. Some examples of messages that did not contain disclosures include quotes, greetings, advertisements, web links to videos and news articles, invitations, questions, recommendations and advice, and jokes.

Disclosure goal coding

The second set of coding was conducted on participants' open-ended responses to the question "What goal did you try to accomplish with this message?" which participants were asked to provide for each of their messages. In most cases participants identified only one goal for each message; in rare cases ($N = 48$) when there were multiple goals, they were separated into two ($N = 47$) or three ($N = 1$) goals. For messages that were

reported to have more than one goal, each goal was incorporated as a separate instance in the analyses. The average length of response to the question of disclosure goal was 11.12 words (Min = 1, Max = 62, $SD = 7.81$).

The detailed goal coding scheme was developed based on Derlega and Grzelak's (1979) goal descriptions, with five primary goal categories (see Table 1). After the pilot coding and prior to the start of final coding, this coding scheme was further enhanced for application in social media by adding two new categories, information sharing and information storage and entertainment, based on Lee et al.'s (2008) categorization of disclosure motivations in blogs, which have also been found to apply to Facebook (Waters & Ackerman, 2011). The goals that did not fit into any of the seven categories were placed into the "other/unclear" category (4.74%). Two different coders were trained to be familiar with the full coding scheme over multiple training sessions. After the training was completed, they independently coded the goal described for all messages containing disclosures ($\kappa = .74$), with disagreements resolved through discussion. Coders were blind to the disclosure context condition and were instructed to code based on the source of value or rewards as identified in each goal description.

Results

The effect of Facebook communication forms on disclosure goals

Multinomial model with unordered categories

Since there were multiple messages received from each participant, the data were not independent and were modeled using a hierarchical linear regression in SAS software. H1 predicted differences in disclosure goal pursuit between Facebook status updates, wall posts, and private messages. Since the outcome variable of disclosure goal contained several unordered categories, we ran a hierarchical multinomial logit model for unordered categories in SAS GLIMMIX controlling for random differences attributable to participants. To achieve model convergence, the categories with frequency below 2% ("identity clarification" and "information storage and entertainment"), as well as the "other/unclear" category, were eliminated from the analysis.

A test of covariance based on the residual pseudolikelihood analysis revealed a significant random effect attributable to individuals, $X(5) = 35.72$, $p < .001$. The global effect of condition was also significant, $F(8, 637) = 20.14$, $p < .001$, rejecting the null hypothesis that the condition had no effect on the probability distribution of the goal variable. The analysis also controlled for the effect of gender because of the uneven gender distribution in the sample, the timespan in which messages were produced, and characteristics of Facebook use. Only the effect of gender was significant, $F(4, 147) = 3.23$, $p = .01$. All the other covariates did not influence the probability of disclosure goals, $p > .05$, and were, therefore, dropped from further analyses. Thus, the results of the multinomial analysis indicate that disclosures in Facebook status updates, wall posts, and private messages are associated with a different set of strategic goals and motivations.

Table 1 Total Number and Percentage of Goals by Facebook Condition

Goal	Source of Value/ Reward Sought	Example	N/ Overall %	N of Status Updates/ Column %	N of Wall Posts/ Column %	N of Private Messages/ Column %
Identity clarification	To increase personal clarification and convey one's personal identity	"I was conveying how much I liked the scent of something"	13/1.62%	6/2.40%	3/1.35%	4/1.22%
Relational development	To manage or maintain a relationship	"I was trying to fix a fight between my sister and her best friend"	286/35.7%	25/10.00%	113/50.90%	148/44.98%
Social validation	Validation of one's self-concept; seeking approval and support from others	"To brag about my anniversary gift"	238/29.71%	129/51.60%	53/23.87%	56/17.02%
Social control and resource gain	Obtain benefits and information from others; to control social outcomes	"I was trying to get someone to answer questions about my lab report"	96/11.99%	16/6.40%	13/5.86%	67/20.36%
Self-expression and relief of distress	Express feelings and thoughts; release pent-up feelings	"Ranting about my work"	72/8.99%	50/20.00%	13/5.86%	9/2.74%
Information sharing to benefit others	To benefit other(s) by sharing information or a personal experience	"Inform friends about upcoming events"	48/5.99%	3/1.20%	14/6.31%	31/9.42%
Information storage and entertainment	Personal enjoyment, future use (storage), and pleasure	"Create a playlist of pump-up songs to listen before a sporting event"	10/1.25%	5/2.00%	3/1.35%	2/.61%

Notes: The remaining percentages for each column are for messages with the goals coded as "other/unclear."

Binomial models on separate goal categories

The multinomial regression was followed by a set of binary logit models comparing the effect of condition on the probability of a goal being in a specific category versus all the other categories. No binary logit model was formulated for the “other/unclear” category, resulting in N-1 logit models (Allison, 2001). As gender had a significant relationship with goals in the multinomial model above, the binomial models included the effect of gender and the random effect attributable to individuals to control for multiple messages sampled from each individual. The results, including model statistics, LS-means, and odds ratio, are summarized in Table 2.

As predicted by H2, relational development goal was found to be more prominent in directed wall posts and private messages than in status updates, with odds of a relational goal about 11 times higher in wall posts than in status updates, $p < .001$, and about 9 times higher in private messages than in status updates, $p < .001$. There was no significant difference between wall posts and private messages, $p = .32$, with odds of a relational goal about 1.20 higher for wall posts than for private messages. Because the effect of gender was also significant, with higher probability of a relational goal for females ($M = 0.33$, $SE = .03$) than males ($M = 0.20$, $SE = .04$), we

Table 2 Exponentiated Mean Probabilities, Standard Errors, Odds Ratio, and Test Statistics for Binomial Models for Every Goal Category

Goal Category	Status Update <i>M (SE)</i>	Wall Post <i>M (SE)</i>	Private Message <i>M (SE)</i>	Facebook Condition	Exponentiated Odds Ratio			Gender
					Status vs. Private	Status vs. Wall	Wall vs. Private	
Identity clarification	.03 ^a (.01)	.02 ^a (.01)	.01 ^a (.01)	$F(2,773) = .80$, $p = .45$	2.19	1.85	1.19	$F(1,82) = .70$, $p = .41$
Relational development	.07 ^a (.02)	.45 ^b (.05)	.41 ^b (.04)	$F(2,773) = 44.26$, $p < .001$	.11*	.09*	1.20	$F(1,79) = 5.19$, $p = .03$
Social validation	.57 ^c (.04)	.26 ^a (.04)	.18 ^b (.03)	$F(2,773) = 41.26$, $p < .001$	5.98*	3.87*	1.55	$F(2,72) = 2.31$, $p = .13$
Social control and resource	.07 ^a (.02)	.06 ^a (.02)	.23 ^b (.03)	$F(2,773) = 16.10$, $p < .001$	.26*	1.17	.22*	$F(1,58) = 6.46$, $p = .01$
Self-express. and relief	.14 ^b (.03)	.04 ^a (.01)	.02 ^a (.01)	$F(2,773) = 18.79$, $p < .001$	8.77*	3.82*	2.29	$F(1,154) = 2.82$, $p = .10$
Info sharing	.01 ^a (.01)	.06 ^b (.02)	.09 ^b (.02)	$F(2,699) = 6.18$, $p < .001$	.12*	.18*	.67	$F(1,74) = .40$, $p = .53$
Storage and entertainment	.02 ^a (.01)	.02 ^a (.01)	.01 ^a (.01)	$F(2,773) = .77$, $p = .46$	2.94	1.24	2.36	$F(1,90) = .80$, $p = .37$

Notes: Mean probabilities significantly different from each other are indicated by a different subscript across the rows. The magnitude of an odds ratio is considered to indicate strong relationships if it is over 3.0 for positive associations and less than .33 for negative associations (Breaugh, 2003), as indicated by *.When the gender effect was significant, it was followed up by the analysis of the interaction effect of gender and condition. The interaction effect was not significant: for the goal of relational development, $F(2, 771) = .94$, $p = .39$, and for the goal of social control and resource, $F(2,771) = 1.05$, $p = .35$.

probed for the effect of Gender \times Condition interaction, but it was not significant (see Table 2).

Consistent with H3a predicting that social validation goals are more prominent in status updates than wall posts and private messages, the effect of condition was significant, with odds of social validation goals about 3.87 times higher in status updates than in wall posts, $p < .001$, and about 6 times higher in status updates than in private messages, $p < .001$. Consistent with H3b, the difference between wall posts and private messages was also significant, $p = .05$, with odds of a social validation goal about 1.5 times higher in wall posts than in private messages.

Disclosure intimacy

Next, we tested predictions about how Facebook conditions (H4) and disclosure goals (H5) affect disclosure intimacy. The model was run with fixed effects of condition, disclosure goal, and the interaction of goal and condition, and random effects allowing the intercepts and slopes to vary across participants (the intraclass correlation was equal to .18 based on the null model). Additionally, we controlled for the number of words in a disclosure message, $F(1, 640) = 38.47$, $p < .001$, and timespan within which messages were produced, $F(1, 346) = 5.80$, $p = .02$, as well as for participants' characteristics, including gender and Facebook use (number of Facebook friends, number of years and minutes per day using Facebook), none of which was significant, $p > .05$. Consistent with H4 and H5, the effects of condition and goal were significant: For condition, $F(2, 644) = 8.45$, $p < .01$, and for goal, $F(6, 634) = 6.86$, $p < .01$, $\eta^2 = .43$; the interaction of goal and condition was not significant, $F(12, 630) = .69$, $p = .76$. As can be seen from the patterns of LS-means after the Bonferroni adjustment in Table 3, disclosures via private messages were more intimate than disclosures either via status updates, $p < .001$, or via wall posts, $p < .001$. Consistent with H6, disclosures prompted by relational goals were more intimate than disclosures prompted by social validation goal, $p < .001$, or social control goal, $p < .001$.

Mediational analysis

Finally, we ran a mediational analysis to test whether disclosure goals mediated between Facebook condition and disclosure intimacy. Because the mediator was a categorical variable, we used a Z-mediation procedure fit for mediational analysis with binary mediators (Iacobucci, 2012) using goal categories as dichotomous variables as in the binomial models above. Following the steps described in Iacobucci (2012), we first ran a logistic regression regressing the mediator (goal category) on the predictor (Facebook condition); the second step was to regress the dependent variable (disclosure intimacy) on both the mediator (goal) and the predictor (condition); the third step was to find the standardized elements z_a for the predictor from the first equation and z_b for the mediator from the second regression by dividing their parameter estimates by their standard errors. Finally, we computed the z-test statistics by dividing the product of z_a and z_b by their collected standard error and comparing it against a standard normal $|1.96|$ at .05 level of significance. As can be

Table 3 Least Squares Means and Standard Errors for Disclosure Characteristics

	Condition	Disclosure Intimacy M (SE)
Facebook Condition	Status update	3.54 ^a (.20)
	Wall post	3.74 ^a (.22)
	Private message	4.54 ^b (.21)
Disclosure Goal Category	Identity clarification	3.86(.41)
	Relational development	4.47 ^c (.15)
	Social validation	3.71 ^{de} (.14)
	Social control	3.41 ^d (.20)
	Self-expression and relief	4.35 ^{ce} (.23)
	Information sharing	3.89(.30)
	Storage and entertainment	3.90(.46)

Notes: Significant differences in LS-Means are indicated by a different subscript for Facebook conditions and disclosure goals separately.

Table 4 Mediation Analyses on Each Disclosure Goal Category

Goal Category	z_a	z_b	$\frac{z_{\text{mediation}}}{(z_a * z_b) / \sqrt{(z_a^2 + z_b^2 + 1)}}$	Ratio of Indirect to Direct Effect
Identity clarification	-1.07	-.03	.03	.01
Relational development	8.06	6.26	4.92*	4.69
Social validation	-8.53	-3.73	3.40*	2.95
Social control and resource	5.05	-3.46	-2.82*	-1.62
Self-expression and relief	-6.36	2.34	-2.17*	-1.38
Information sharing	3.87	-.16	-.15	-.06
Storage and entertainment	-1.46	.01	-.01	-.01

* $z_{\text{mediation}}$ is significant at the $\alpha = .05$ if it exceeds $|1.96|$ for a two-tailed test with $\alpha = .05$

seen from Table 4, all the goals, except for very infrequent ones, had a significant mediation effect. Relational development and social validation goals had the largest effects, as measured by the ratio of indirect to direct effect (Breugh, 2003), with the indirect effect of relational goal about 4.69 times the size of the direct effect, and the indirect effect of social validation goal about three times the size of the direct effect. Thus, taken together, the mediation effects found on relational development, social validation, social control, and self-expression goals lend support to H7.

Discussion

The goal of this research was to examine what drives people to self-disclose, and how disclosure goals affect disclosure intimacy on SNSs. Building on the functional

approach to self-disclosure and research on audience representations as cues activating interpersonal goals, we proposed the functional model of self-disclosure on SNSs, according to which people pursue strategic goals and disclose differently depending on media affordances, and disclosure goals mediate between media affordances and disclosure intimacy. The results support this model and provide insights into the motivational drivers of self-disclosure on SNSs, helping to reconcile the traditional views on disclosure and self-disclosing behaviors in new media contexts.

Conceptual contributions

This study is one of the first to apply the functional approach to the analysis of actual communication behaviors in social media or elsewhere since most of the empirical work that builds on the functional approach relied on self-reports of self-disclosure behaviors in some real or imaginary situations (e.g., Lee et al., 2008; Waters & Ackerman, 2011). The value of the functional approach, however, is in connecting self-disclosure goals to message characteristics, which requires looking into actual communication content and goals associated with it. Further, our research extends previous studies of disclosure motivations on Facebook, which tended to treat it as a monolithic medium, without accounting for differences in visibility or directedness between its communication forms (e.g., Hollenbaugh & Ferris, 2014; Waters & Ackerman, 2011).

Since Facebook affords both public and private, as well as directed and nondirected forms of communication, we used self-disclosure in private and direct messaging, which is close to the dyadic condition described in the classic self-disclosure models, as a basis of comparison for more visible and public status updates and wall posts. The results confirm that people pursue a different set of strategic goals and motivations in different communication forms on SNSs, with both visibility and target directedness affecting prevalent self-disclosure goals. As such, our findings reveal that self-disclosures in Facebook status updates, wall posts, and private messaging are motivated by different reward values. For public status updates directed at general others, the two main reasons for self-disclosure were social validation and self-expression/relief, together accounting for over 70% of all self-disclosures. However, relational development was the primary goal for self-disclosing in wall posts and private messaging, both of which are directed at a specific target, with 50.90 and 44.98%, respectively. Social validation goals were also more prominent in public wall posts (23.87%) compared to private messaging (17.02%).

One way to consider differences between self-disclosure goals is by mapping them onto intrapersonal–interpersonal orientation, which represents the extent of orientation toward the self or the other and the level of interdependency between the discloser and receiver (Archer & Earle, 1983). Identity clarification and self-expression goals fall on the *intrapersonal* end of the continuum, whereas relational development represents an interpersonal type of goal. Social validation goals fall in the middle of *intra–interpersonal* continuum, or what Archer and

Earle (1983) refer to as “self-to-other” orientation, because a discloser seeks to validate and affirm oneself by means of eliciting feedback from others, either directly or indirectly, and, thus, implicitly acknowledges some interdependence between himself/herself and audience. As status updates are primarily motivated by social validation and self-expression goals, communication via status updates is more self-than other-oriented compared to that in wall posts and private messaging since disclosers seek to express and validate themselves more than to connect with others via status updates. This extends the recent findings about Facebook serving as a source of self-affirmation (Toma & Hancock, 2013) by providing evidence that people strategically seek social validation and self-affirmation in Facebook communication, especially via status updates.

Wall posts, on the other hand, share characteristics of both status updates (i.e., public) and private messaging (i.e., directed at a specific target). Similar to private messages, relational development is the most common disclosure goal for wall posts; however, wall posts have a higher proportion of social validation goals compared to private messaging. It appears that a representation of a particular receiver, whether in private or in public, drives more interpersonal than self-oriented goals, whereas network visibility contributes to a greater proportion of social validation goals in disclosures via wall posts compared to private messaging. As wall posts can be directed at different types of receivers (e.g., more vs. less familiar partners), future research should consider how representations of different partners affect disclosure goals in wall posts and private messaging.

Our research also extends understanding of disclosure intimacy on SNSs, especially for disclosure happening in everyday communication in social media. Most studies of self-disclosure characteristics on SNSs either focused on static profile-type information such as names, contact information, hobbies, and relationship status or relied on self-reports (e.g., Stutzman, Capra, & Thompson, 2011; Tufekci, 2008), with a majority of them examining self-disclosure amount as opposed to its intimacy (e.g., Vitak, 2012; Kivran-Swaine & Naaman, 2011). However, most self-disclosure happens not in profiles but in everyday communication with others that allows people to develop relationships, provide social support, and build social capital.

Our results on disclosure intimacy show that consistent with the theorized differences between private and broadcasting self-disclosure (Jourard, 1971; Pearce & Sharp, 1973), Facebook users on average disclose more intimate information in closed and private communication compared to public status updates and wall posts. These results raise an intriguing possibility that when people cannot control a disclosure target, as with invisible and multiple audiences in more visible SNS communication forms, they compensate for the lack of target control by increased control and selectivity over disclosure content, that is, by sharing less intimate and private information. As Ben-Ze'ev (2003) argued, although people may share more self-disclosures online, they can do so without increasing their vulnerability: “Our private zone can contract only around those issues that we select, while we can expand the zone around issues that we wish to keep private”

(p. 463). This suggests that information control may be exercised not at the level of disclosure amount, but its intimacy, which is consistent with findings from previous research showing that people share more disclosures, not less, in larger, more diverse, and sparser networks on SNSs (Vitak, 2012; Kivran-Swaine & Naaman, 2011).

At the same time, our model does not exclude a possibility that people can and sometimes do post intimate and personal information in status updates despite the fact that they reach a broader audience. Although most status updates are motivated by social validation goals, a number of status updates in our study reflect self-expression and relief goals, which are associated with self-disclosures as intimate as those motivated by relational development goals. As self-disclosure goals mediate between social media affordances and disclosure intimacy, this confirms the importance of the motivational perspective, i.e., examining disclosure goals and motivations for understanding and predicting disclosure behaviors.

Directions for future research

Self-disclosure occurs under the consideration of a complex combination of factors that are both internal and external to the discloser. While the focus of this work was on the role of internal disclosure motivations in predicting disclosure intimacy, there are other factors, such as personality traits and situational disclosure risks, which influence disclosure characteristics. For example, personality traits such as openness, agreeableness, neuroticism, and psychological disposition for self-disclosure have been linked to disclosure decisions on SNSs (e.g., Treppe & Reinecke, 2013). Other work has also considered the influence of factors such as dispositional and situational privacy concerns (e.g., Acquisti & Gross, 2006; Joinson, Reips, Buchanan, & Schofield, 2010; Stutzman et al., 2011) and personal network characteristics (Kivran-Swaine & Naaman, 2011; Vitak, 2012) as elements that affect disclosure strategies. Interestingly, work by Brandtzæg, Lüders, and Skjetne (2010) has highlighted the conflict users experience between the want to share content and be sociable, and on the other hand, concerns of surveillance and the need for privacy, which suggests multiple motivations involved in self-disclosure decisions on SNSs. This type of dialectical conflict arising from motivations to share information and privacy concerns about this information can be even more prominent with digital media that makes available other types of information about users, for example, locational or temporal data such as with Twitter's GeoAPI or location-based technologies (Humphreys, Gill, & Krishnamurthy, 2010). Furthermore, as features of SNSs provide various opportunities for self-disclosures, for example, uploading photos, videos, liking, and commenting on them, it will be important to consider disclosure motivations underlying these new ways to share personal information with online audiences. Future work should consider a systematic integration of such factors, which include subjective risks and rewards of self-disclosure, media affordances, network characteristics, and personality

traits, to provide a fuller and more complete model of self-disclosure in social media.

Future research might also consider how disclosure motivations relate to social outcomes attained through SNS communication, including relational maintenance (e.g., Sosik & Bazarova, 2014) and social capital benefits. For example, Ellison and colleagues have proposed a theoretical link between self-disclosure and social capital on Facebook, as people have to disclose their needs in order to form and mobilize their social ties (Ellison, Vitak, Steinfield, Gray, & Lampe, 2011). An understanding of motivations underlying self-disclosure on SNSs could further enhance this approach, since people calibrate their disclosing behaviors in accordance with their goals, whether it is looking for a new job, gaining social support, or receiving social validation from others. Findings could also be meaningful when broadening the scope of research to other forms of computer-mediated communication. Whereas Facebook audiences generally consist of known contacts (Manago, Taylor, & Greenfield, 2012), people sometimes intentionally seek out an audience of strangers for fulfilling important disclosure motivations, such as disclosing and seeking support on social support forums (e.g., Norris, Boydell, Pinhas, & Katzman, 2006). Furthermore, the development of specialized and niche websites has greatly increased the number of venues in which people can seek rewards of disclosure, and varying goals of self-disclosure could influence people's choice of which one to utilize. For instance, online forums that have specialized themes of expertise could have the "information sharing" disclosure goal as their most prevalent goal. Future research could consider the rapid development of online communication forms, and what role motivations play in understanding disclosure behavior in these spaces.

Limitations

This study has several limitations related to the use of self-report measure of disclosure goal and a college population. First, a self-report implies a conscious processing of disclosure goals, but these goals may not be always consciously held. However, even nonconsciously activated goals can be accurately reported when asked (Fitzsimons & Bargh, 2003). Second, the sample population mostly consisted of young females. Although we controlled for gender effects in the analyses, it would be desirable to examine the functional approach on different types of populations, including a sample with a more balanced sex distribution, as well as for older users of SNSs who are more likely to have a different set of goals than young adults in this study. The demographic considerations are especially important as developmental differences affect the salience of different goals and motivations throughout the life span (Carstensen, 2006).

Conclusion

As social media appear to have opened floodgates to self-disclosure of thoughts, feelings, and experiences on the Internet, there has been renewed research interest in

what people share, how and why they do it, and what effects it has on their lives, relationships, and our society as a whole. The functional approach in this study contributes to this body of research by giving insights into types of motivations underlying self-disclosure on SNSs, and how they vary based on audience perceptions shaped by media affordances and interfaces. As such, the results suggest that as technologies expand opportunities for self-broadcasting and building personal connections with others, people seize these opportunities to satisfy their instrumental needs and adapt their communication behaviors accordingly.

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Notes

- 1 An earlier version of this paper was presented at the 2013 Annual Convention of the National Communication Association, November, 2013, Washington, DC.
- 2 By “public disclosures” we refer to self-disclosures shared with a whole SNS network of friends or followers, as opposed to dyadic or private disclosures. Public disclosures can also be described as network visible disclosures. Furthermore, we use disclosure and self-disclosure terms interchangeably in this article.

References

- Acquisti, A., & Gross, R. (2006). Imagined communities: Awareness, information sharing and privacy on the Facebook. In G. Danezis & P. Golle (Eds.), *Privacy enhancing technologies* (pp. 36–58). Berlin, Germany: Springer. doi:10.1007/11957454_3
- Albrecht, T. L., & Adelman, M. B. (1987). *Communicating social support*. Thousand Oaks, CA: Sage.
- Allison, P. D. (2001). *Logistic regression using the SAS system*. Cary, NC: John Wiley.
- Altman, I. (1975). *The environment and social behavior: Privacy, personal space, territory, crowding*. Monterey, CA: Brooks/Cole.
- Altman, I., & Taylor, D. A. (1973). *Social penetration: The development of interpersonal relationships*. New York, NY: Holt, Rinehart & Winston.
- Archer, R. L., & Earle, W. B. (1983). The interpersonal orientations of disclosure. In P. B. Paulus (Ed.), *Basic group processes* (pp. 289–314). New York, NY: Springer-Verlag.
- Bargh, J. A., & Williams, E. L. (2006). The automaticity of social life. *Current Directions in Psychological Science*, *15*, 1–4. doi:10.1111/j.0963-7214.2006.00395.x.

- Bazarova, N. N. (2012). Public intimacy: Disclosure interpretation and social judgments on Facebook. *Journal of Communication*, *62*(5), 815–832. doi:10.1111/j.1460-2466.2012.01664.x.
- Bazarova, N. N., Taft, J. G., Choi, Y. H., & Cosley, D. (2013). Managing impressions and relationships on Facebook: Self-presentational and relational concerns revealed through the analysis of language style. *Journal of Language and Social Psychology*, *32*, 121–141. doi:10.1177/0261927X12456384.
- Ben-Ze'ev, A. (2003). Privacy, emotional closeness, and openness in cyberspace. *Computers in Human Behavior*, *19*, 451–467. doi:10.1016/S0747-5632(02)00078-X.
- Bernstein, M. S., Bakshy, E., Burke, M., & Karrer, B. (2013). Quantifying the invisible audience in social networks. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, 21–30. doi:10.1145/2470654.2470658
- Bortree, D. S. (2005). Presentation of self on the web: An ethnographic study of teenage girls' weblogs. *Education, Communication, & Information*, *5*(1), 25–39. doi:10.1080/14636310500061102.
- boyd, d. (2008). *Taken out of context: American teen sociality in networked publics*. Unpublished doctoral dissertation, University of California, Berkeley, CA.
- Brandtzæg, P. B., Lüders, M., & Skjetne, J. H. (2010). Too many Facebook “friends”? Content sharing and sociability versus the need for privacy in social network sites. *International Journal of Human-Computer Interaction*, *26*, 1006–1030. doi:10.1080/10447318.2010.516719.
- Breugh, J. A. (2003). Effect size estimation: Factors to consider and mistakes to avoid. *Journal of Management*, *29*, 79–97. doi:10.1177/014920630302900106.
- Burke, M., Marlow, C., & Lento, T. (2010). Social network activity and social well-being. *CHI '10: Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, 1909–1912. doi:10.1145/1753326.1753613
- Carstensen, L. L. (2006). The influence of a sense of time on human development. *Science*, *312*(5728), 1913–1915. doi:10.1126/science.1127488.
- Chelune, G. J. (1975). Self-disclosure: An elaboration of its basic dimensions. *Psychological Reports*, *36*, 79–85. doi:10.2466/pr0.1975.36.1.79.
- Cozby, P. C. (1973). Self-disclosure: A literature review. *Psychological Bulletin*, *79*(2), 73–91. doi:10.1037/h0033950.
- Derlega, V. J., & Grzelak, J. (1979). Appropriateness of self-disclosure. In G. J. Chelune (Ed.), *Self-disclosure: Origins, patterns, and implications of openness in interpersonal relationships* (pp. 151–176). San Francisco, CA: Jossey-Bass.
- Ellison, N. B., Vitak, J., Steinfield, C., Gray, R., & Lampe, C. (2011). Negotiating privacy concerns and social capital needs in a social media environment. In S. Trepte & L. Reinecke (Eds.), *Privacy online: Perspectives on privacy and self-disclosure in the social web*. Heidelberg: Springer. doi:10.1007/978-3-642-21521-6_3.
- Fitzsimons, G. M., & Bargh, J. A. (2003). Thinking of you: Nonconscious pursuit of interpersonal goals associated with relationship partners. *Journal of Personality and Social Psychology*, *84*, 148–164. doi:10.1037/0022-3514.84.1.148.
- Gilbert, E., & Karahalios, K. (2009). Predicting tie strength with social media. *CHI '09: Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, 211–220. doi:10.1145/1518701.1518736

- Hogan, B. (2010). The presentation of self in the age of social media: Distinguishing performances and exhibitions online. *Bulletin of Science, Technology & Society*, **30**, 377–386. doi:10.1177/0270467610385893.
- Hollenbaugh, E. E., & Ferris, A. L. (2014). Facebook self-disclosure: Examining the role of traits, social cohesion, and motives. *Computers in Human Behavior*, **30**, 50–58. doi:10.1016/j.chb.2013.07.055.
- Humphreys, L., Gill, P., & Krishnamurthy, B. (2010, June). *How much is too much? Privacy issues on Twitter*. Paper presented at the 60th Annual Conference of the International Communication Association, Singapore.
- Iacobucci, D. (2012). Mediation analysis and categorical variables: The final frontier. *Journal of Consumer Psychology*, **22**, 582–594. doi:10.1016/j.jcps.2012.03.006.
- Jiang, L. C., Bazarova, N. N., & Hancock, J. T. (2011). The disclosure–intimacy link in computer-mediated communication: An attributional extension of the hyperpersonal model. *Human Communication Research*, **37**(1), 58–77. doi:10.1111/j.1468-2958.2010.01393.x.
- Jiang, L. C., Bazarova, N. N., & Hancock, J. T. (2013). From perception to behavior: Disclosure reciprocity in computer-mediated and face-to-face interactions. *Communication Research*, **40**, 125–143.
- Joinson, A. N., Reips, U., Buchanan, T., & Schofield, C. B. P. (2010). Privacy, trust, and self-disclosure online. *Human-Computer Interaction*, **25**(1), 1–24. doi:10.1080/07370020903586662.
- Jourard, S. M. (1971). *Self-disclosure: An experimental analysis of the transparent self*. New York, NY: Wiley-Interscience.
- Kivran-Swaine, F., & Naaman, M. (2011). Network properties and social sharing of emotions in social awareness streams. *Proceedings of the ACM 2011 conference on computer supported cooperative work*, 379–382. doi:10.1145/1958824.1958882
- Kramer, A. D. I., & Chung, C. K. (2011). Dimensions of self-expression in Facebook status updates. *Proceedings of the Fifth International Conference on Weblogs and Social Media*, 169–176.
- Krämer, N. C., & Haferkamp, N. (2011). Online self-presentation: Balancing privacy concerns and impression construction on social networking sites. In S. Trepte & L. Reinecke (Eds.), *Privacy online: Perspectives on privacy and self-disclosure in the social web* (pp. 127–141). Heidelberg: Springer. doi:10.1007/978-3-642-21521-6_10.
- Lee, D., Im, S., & Taylor, C. R. (2008). Voluntary self-disclosure of information on the Internet: A multimethod study of the motivations and consequences of disclosing information on blogs. *Psychology & Marketing*, **25**, 692–710. doi:10.1002/mar.20232.
- Litt, E. (2012). Knock, knock. Who's there? The imagined audience. *Journal of Broadcasting & Electronic Media*, **56**(3), 330–345. doi:10.1080/08838151.2012.705195.
- Manago, A. M., Taylor, T., & Greenfield, P. M. (2012). Me and my 400 friends: The anatomy of college students' Facebook networks, their communication patterns, and well-being. *Developmental Psychology*, **48**(2), 269–380. doi:10.1037/a0026338.
- Marwick, A. E., & boyd, d. (2011). I tweet honestly, I tweet passionately: Twitter users, context collapse, and the imagined audience. *New Media & Society*, **13**, 114–133. doi:10.1177/1461444810365313.
- Miller, L. C., & Read, S. J. (1987). Why am I telling you this? Self-disclosure in a goal-based model of personality. In V. J. Derlega & J. Berg (Eds.), *Self-disclosure: Theory, research, and therapy* (pp. 35–58). New York, NY: Plenum.

- Neuendorf, K. A. (2002). *The content analysis guidebook*. Thousand Oaks, CA: Sage.
- Norris, M. L., Boydell, K. M., Pinhas, L., & Katzman, D. K. (2006). Ana and the Internet: A review of pro-anorexia websites. *International Journal of Eating Disorders*, *39*(6), 443–447. doi:10.1002/eat.20305.
- Omarzu, J. (2000). A disclosure decision model: Determining how and when individuals will self-disclose. *Personality and Social Psychology Review*, *4*, 174–185. doi:10.1207/S15327957PSPR0402_05.
- Parks, M. R. (1982). Ideology in interpersonal communication: Off the couch and into the world. *Communication Yearbook*, *5*, 79–107.
- Pearce, W. B., & Sharp, S. M. (1973). Self-disclosing communication. *Journal of Communication*, *23*, 409–425. doi:10.1111/j.1460-2466.1973.tb00958.x.
- Petronio, S. S. (2002). *Boundaries of privacy: Dialectics of disclosure*. Albany, NY: State University of New York Press.
- Rosenfield, L. B., & Kendrick, W. L. (1984). Choosing to be open: An empirical investigation of subjective reasons for self-disclosing. *Western Journal of Speech Communication*, *48*, 326–343. doi:10.1080/10570318409374168.
- Rubin, Z. (1975). Disclosing oneself to a stranger: Reciprocity and its limits. *Journal of Experimental Social Psychology*, *11*(3), 233–260. doi:10.1016/S0022-1031(75)80025-4.
- Schau, H. J., & Gilly, M. C. (2003). We are what we post? Self-presentation in personal web space. *Journal of Consumer Research*, *30*(3), 385–404. doi:10.1086/378616.
- Sosik, V., & Bazarova, N. N. (2014). Relational maintenance on Facebook: How Facebook communication predicts relational stability and change. *Computers in Human Behavior*, *35*, 124–131.
- Stutzman, F., Capra, R., & Thompson, J. (2011). Factors mediating disclosure in social network sites. *Computers in Human Behavior*, *27*, 590–598. doi:10.1016/j.chb.2010.10.017.
- Tamir, D. I., & Mitchell, J. P. (2012). Disclosing information about the self is intrinsically rewarding. *Proceedings of the National Academy of Sciences of the United States of America*, *109*(21), 8038–8043. doi:10.1073/pnas.1202129109.
- Taylor, D. A., Wheeler, L., & Altman, I. (1973). Self-disclosure in isolated groups. *Journal of Personality and Social Psychology*, *26*(1), 39–47. doi:10.1037/h0034233.
- Toma, C. L., & Hancock, J. T. (2013). Self-affirmation underlies Facebook use. *Personality and Social Psychology Bulletin*, *39*, 321–331. doi:10.1177/0146167212474694.
- Treem, J. W., & Leonardi, P. M. (2012). Social media use in organizations: Exploring the affordances of visibility, editability, persistence, and association. *Communication Yearbook*, *36*, 143–189.
- Trepte, S., & Reinecke, L. (2013). The reciprocal effects of social network site use and the disposition for self-disclosure: A longitudinal study. *Computers in Human Behavior*, *29*, 1102–1112. doi:10.1016/j.chb.2012.10.002.
- Tufekci, Z. (2008). Grooming, gossip, Facebook and MySpace: What can we learn about these sites from those who won't assimilate? *Information, Communication & Society*, *11*(4), 544–564. doi:10.1080/13691180801999050.
- Vitak, J. (2012). The impact of context collapse and privacy on social network site disclosures. *Journal of Broadcasting & Electronic Media*, *56*, 451–470. doi:10.1080/08838151.2012.732140.

- Walther, J. B. (1996). Computer-mediated communication: Impersonal, interpersonal, and hyperpersonal interaction. *Communication Research*, **23**, 3–43. doi:10.1177/009365096023001001.
- Waters, S., & Ackerman, J. (2011). Exploring privacy management on Facebook: Motivations and perceived consequences of voluntary disclosure. *Journal of Computer-Mediated Communication*, **17**, 101–115. doi:10.1111/j.1083-6101.2011.01559.x.
- Westin, A. F. (1967). *Privacy and freedom*. New York, NY: Atheneum.