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College Students’ Romantic Relationships on Facebook: Linking the Gratification for Maintenance to Facebook Maintenance Activity and the Experience of Jealousy

Marianne Dainton & Alexandra Stokes

Previous work indicates that one of the central motives for using Facebook is relationship maintenance and that the use of Facebook is linked with romantic jealousy. Grounded in a uses and gratifications perspective, this study examined the maintenance motive for using Facebook; positive and negative online maintenance activity; and trait, cognitive, emotional, and Facebook jealousy. Results indicate that individuals who are strongly motivated to use Facebook for relationship maintenance are more likely to engage in Facebook assurances and monitoring but that there is a curvilinear relationship between the maintenance motive and the use of online monitoring. Regarding the patterns of relationships among Facebook maintenance and the various forms of jealousy, results indicate that the more that individuals used online monitoring and Facebook openness, the more of all four types of jealousy they reported, whereas the use of Facebook positivity and assurances was negatively associated with cognitive jealousy. Finally, there was little evidence of a relationship between the use of Facebook for maintenance purposes and the experience of jealousy.

Keywords: New Media; Romantic Relationships
Numerous scholars have focused on the effects of the Internet on romantic relationships (Bryant & Marmo, 2009; Muise, Christofides, & Desmarais, 2009; Utz & Beukeboom, 2011), with results confirming that the Internet provides a mechanism by which relationships are developed, maintained, and terminated. Nowhere is that more obvious than on the social media site Facebook, which is noted for its relationship status indicator. Despite the fact that Facebook is perceived to be useful for relationship maintenance, the use of Facebook is associated with a number of different forms of jealousy (Elphinston & Noller, 2011; Marshall, Bejanyan, Di Castro, & Lee, 2013). This article seeks to draw connections between the use of Facebook for relationship maintenance and feelings of jealousy, with a particular focus on the extent to which maintenance and jealousy predict relationship satisfaction in college student romantic relationships. The study is framed in a uses and gratifications perspective.

Uses and Gratifications

A uses and gratifications (U&G) perspective proposes that individuals select particular communication channels for which they anticipate receiving desired gratifications (Blumler & Katz, 1974). For example, an individual might choose to read a newspaper to receive information, view a television cooking show to learn how to roast a chicken, or watch a movie thriller to feel excitement. The perspective assumes that people are active consumers of communication who make choices about both the channels they select and the content to which they attend (Katz, Blumler, & Gurevitch, 1973).

Originally developed to explain one-way media such as television and film, more recently, the approach has been used to understand newer media forms, including social media. U&G’s focus on an active audience is particularly well suited to studying social media given the interactivity of the medium (Urista, Qingwen, & Day, 2009). Several scholars have begun to investigate the gratifications sought in using various social media channels. For example, Urista et al. (2009) used focus groups to identify five themes for college students’ use of Facebook and MySpace: the efficiency of communication, convenience, curiosity about others, popularity, and relationship formation and reinforcement. Alternatively, Quan-Haase and Young (2010) interviewed college students about why they used Facebook. Two motivations emerged: social connectivity (to maintain relationships with people in their network) and social information (to learn about people in their network). Finally, Sheldon (2008) studied six gratifications for students’ use of Facebook; the most frequent gratification sought was relationship maintenance.

These studies strongly suggest that one of the central motivations for college students’ use of Facebook is for relationship maintenance (see also Ellison, Steinfield, & Lampe, 2007). At question, then, is not whether people use Facebook to maintain relationships but how people use Facebook to maintain relationships. This study seeks to answer that question.
Relationship Maintenance

Relationship maintenance is defined as those behaviors that function to sustain preferred relationship characteristics, such as satisfaction (Dindia & Canary, 1993). Although several typologies of maintenance behaviors exist, the typology developed by Stafford and colleagues provides the most common operationalization of pro-social relationship maintenance behavior (Canary & Stafford, 1992; Stafford & Canary, 1991). The Stafford and Canary maintenance typology includes positivity (being upbeat and cheerful), openness (sharing private thoughts), assurances (reassuring the partner of an individual’s commitment), sharing tasks (assisting with instrumental activities), and social networks (relying on common friends and affiliations). Numerous studies indicate that these pro-social behaviors are consistent and strong predictors of relationship satisfaction (Stafford, 2003).

In addition to these pro-social maintenance behaviors, scholars recognize that negative behaviors also contribute to relationship maintenance. That is, individuals might engage in connotatively negative behaviors in order to reduce undesired levels of relationship qualities (e.g., to shift commitment levels lower, see Ayres, 1983). Indeed, behaviors typically considered to be antisocial might be used to sustain positive relationship characteristics (Metts, 1989). Following Metts’ argument, Dainton and Gross (2008) identified six distinct maintenance behaviors considered to have negative social connotations. The behaviors included jealousy induction (an intentional effort to make the partner jealous), avoidance (avoiding the partner as well as avoiding topics that might lead to arguments), spying (actively seeking information about the partner), infidelity (behaviors ranging from flirting to having sex with other people so that the individual can prevent boredom in the relationship), destructive conflict (using unproductive conflict strategies), and allowing control (letting the partner make plans or decisions). These behaviors are related in complex ways with relationship characteristics. For example, Goodboy, Myers, and Members of Investigating Communication (2010) found that individuals with particular love styles enact negative maintenance behaviors regardless of existing relationship quality.

The use of both positive and negative maintenance impacts relationship characteristics. However, at question is the extent to which such behaviors are enacted on Facebook and the impact of such enactment on the relationship. From a U&G perspective, individuals who use Facebook for the relationship maintenance gratification should be more likely to engage in specific maintenance behaviors online. Accordingly, a discussion of Facebook-related relationship maintenance is warranted.

Facebook and relationship maintenance. Although there is a great deal of empirical support for the extent of the relationships between maintenance activity and relational characteristics, questions arise as to whether these same behaviors are used on Facebook. Early indications are that the behaviors identified by Stafford, Canary and colleagues are applicable to computer-mediated channels (CMC). Ledbetter (2010), for example, found support for the use of the typology via CMC overall but found that two of the behaviors lacked face validity for CMC settings, detracting from
model fit. That is, he found support for using measures of positivity, openness, and assurances via CMC, but less support for the use of social networks and sharing tasks using CMC.

Ledbetter did not investigate the use of maintenance behaviors on Facebook specifically. Indeed, scholars are just beginning to uncover the specific mechanisms by which relationships are maintained via Facebook. Three distinct groups of scholars are contributing to this early work. The first group is Bryant and Marmo. In 2009, these scholars used focus groups to uncover 73 distinct ways that individuals reported using Facebook for relationship maintenance. They then used the work of Canary, Stafford, Hause, and Wallace (2003) to code these items into supra-categories. Marmo and Bryant (2010) followed up their exploratory study by investigating variations in the use of Facebook maintenance by type of friendship. They found that that close friends reported more Facebook maintenance than did casual friends, who in turn reported using more Facebook maintenance than did acquaintances.

The second group of scholars includes Wright and colleagues. Wright’s (2004) early work focused more generally on relationship maintenance using computer-mediated communication. However, more recently, Craig and Wright (2012) found that attitude similarity and social attraction would lead to self-disclosure on Facebook, which in turn would lead to predictability and interdependence.

The final group of researchers focusing on relationship maintenance and Facebook is Dainton and colleagues. First, Dainton and Berkoski (2013) studied the relationships among the frequency of Facebook use, emotional jealousy, and an individual’s use of positive and negative maintenance behavior. They found no relationships between the amount of time an individual spent on Facebook and feelings of jealousy, and only two relationships between time spent on Facebook and the use of maintenance behavior. Specifically, they found a moderate, positive relationship between the amount of time spent on Facebook and the use of advice and sharing tasks. However, Dainton and Berkoski (2013) assessed only the general use of maintenance, not Facebook-specific maintenance. Moreover, they focused on only one type of jealousy.

Next, Dainton (2013) relied on the work of Marmo and Bryant (2010) as well as the work of Ledbetter (2010) to identify and test a measure of Facebook maintenance. She found evidence of the reliability and validity of Facebook measures of assurances, openness, and positivity. However, the use of these maintenance behaviors online predicted only a small amount of the variance in relationship satisfaction.

Finally, Stewart, Dainton, and Goodboy (2014) investigated the relationships between Facebook maintenance and uncertainty. They noted that although using Facebook as a means to initiate or maintain a romantic relationship may be a positive result from using the site, there is also evidence of negative relationship behaviors on Facebook. Numerous studies indicate that online monitoring is a common behavior used for maintenance purposes (Bryant & Marmo, 2009; Dainton & Gross, 2008; Muise et al., 2009). Accordingly, they included online monitoring as a form of negative maintenance. Stewart et al. (2014) found that when romantic partners
perceived mutual and definitional uncertainty in their relationship, they used more Facebook monitoring to maintain their relationship, and that when partners reported future and definitional certainty, they used more Facebook assurances and openness.

Given that the most frequent motivation for using Facebook is for relationship maintenance purposes (Sheldon, 2008), and that four specific behaviors have been identified as Facebook maintenance behaviors (Stewart et al., 2014), logic dictates that individuals who use Facebook in order to maintain their relationship will be more likely to enact specific maintenance behaviors. This leads to the following hypothesis:

\[ H1: \text{Individuals who indicate strong agreement with using Facebook for relationship maintenance will enact more Facebook assurances, positivity, openness, and online monitoring than will individuals who indicate disagreement or moderate agreement with using Facebook for maintenance purposes.} \]

Facebook, Relationship Maintenance, and Jealousy

Positive and negative behaviors coexist in relationships, and this is true for social media sites as well. Roggensack, McFadden, Sherwood, & Sullivan (2010) respondents indicated that misunderstood wall posts, photos, or the “inappropriateness” of the partner instigated a conflict. Muise et al. (2009) found that the amount of time spent on Facebook directly relates to an increase in the feelings of jealousy in a romantic relationship. A host of research has established that the use of Facebook is associated with heightened feelings of jealousy (Elphinston & Noller, 2011; Marshall et al., 2013; Muscanell, Guadagno, Rice, & Murphy, 2013). Accordingly, the next variable of interest is jealousy, with a particular focus on how jealousy is related to relationship maintenance.

Romantic jealousy is defined as the reaction to a real or perceived threat to a romantic relationship (White & Mullen, 1989). Relationship uncertainty is at the core of the experience of jealousy, with individuals experiencing higher levels of relational uncertainty more likely to experience situational jealousy (Afifi & Reichert, 1996). The perceived threat one feels may be associated with different types of situational jealousy. Suspicious or concerned thoughts that occur as a result of the threat are considered cognitive jealousy, while emotional jealousy is the feelings of anger, fear and insecurity that result from the threat (Pfeiffer & Wong, 1989). Dainton and Aylor (2001) found that the experience of jealousy was significantly, negatively correlated with pro-social maintenance use, although these authors did not differentiate between cognitive and emotional jealousy.

In addition to these two experiences of jealousy, psychologists have also identified an individual-level variable called trait jealousy. Trait jealousy is defined as the extent to which people demonstrate jealousy across different situations and relationships (Bringle, 1981; White, 1984). People who exhibit this trait also tend to exhibit low self-esteem (e.g., Bringle, 1981), an external locus of control (e.g., Bringle & Buunk, 1986), and the preoccupied attachment style (e.g., Hazan & Shaver, 1987). Utz and Beukeboom found that although trait jealousy was not significantly related to the
use of Facebook overall, online monitoring behavior was positively associated with
trait jealousy, suggesting a link between trait jealousy and the use of maintenance
behaviors.

The final type of jealousy of interest is Facebook jealousy. Facebook-related jeal-
sousy is defined as feelings of jealousy associated with reviewing a partner’s Facebook
page (Muise et al., 2009). Muise et al. (2009) found that trait jealousy significantly
predicted Facebook jealousy, a result confirmed by Utz and Beukeboom (2011).
Further, both Muise et al. (2009) and Utz and Beukeboom (2011) found that the
more time an individual spent on Facebook, the more Facebook-related jealousy
he or she experienced. Regarding the relationship between relationship maintenance
and Facebook jealousy, Dainton (2013) found that the use of all four Facebook main-
tenance variables was positively associated with feelings of Facebook jealousy, and
Utz and Beukeboom (2011) found that online monitoring was significantly, posi-
tively related to Facebook jealousy.

Given the results of the aforementioned research, we can predict significant
relationships between the experience of jealousy and the online use of maintenance
behavior. However, a nuanced investigation of the role of jealousy in Facebook must
recognize “jealousy as containing distinct subtypes with different antecedents,
Accordingly, we are interested in disentangling the specific forms of jealousy and
Facebook behavior by differentiating between the dispositional construct of jealousy,
thoughts and feelings of jealousy at a particular point in time, and specific feelings
of jealousy associated with social media use. This leads to our research question.

RQ: What are the relationships among Facebook maintenance behaviors (including
online monitoring) and the cognitive, emotional, trait, and Facebook jealousy?

Facebook Motivations and Jealousy

Investigating the relationships between the experience of jealousy and the use
of Facebook maintenance will provide a more complete picture of the impact of
Facebook on relationships to emerge. Recall, however, that this study is framed
in a U&G perspective. Theoretically, if the use of Facebook for maintenance purposes
is likely to predict the use of Facebook maintenance behaviors, and Facebook
maintenance behaviors are associated with the experience of jealousy, at question
is the relationship between the motive for using Facebook for maintenance purposes
and the experience of jealousy. On the surface, these two variables would not seem to
be related; why would an individual actively choose to use a media form that might
result in negative relationship consequences?

We believe that a different theoretical model might be combined with uses and
gratifications to provide an answer to this question. Guerrero and Andersen’s
(1998) componential model of jealousy might explain how the maintenance
gratification might be related to the experience of jealousy. The componential model
of jealousy suggests, in part, that the jealousy experience triggers jealousy-related
goals, and that these goals in turn lead to variations in communicative responses
to jealousy, and, ultimately, relational consequences. Guerrero and Afifi (1998, 1999) argued that jealousy-related goals are cognitive appraisals of how an individual might meet individual and relational objectives when jealousy is experienced, regardless of the form of jealousy. They identified six jealousy-related goals: equity restoration, uncertainty reduction about the primary relationship, uncertainty about the rival relationship, bolstering self-esteem, relational maintenance, and relational reassessment. These goals drive the types of messages sent in response to the jealousy. The componential model of jealousy would suggest that we can anticipate a positive relationship between the experience of jealousy and the goal of relationship maintenance. As such, blending a U&G approach with the componential model of jealousy, we can predict:

\[ H2: \text{There will be significant, positive relationships between cognitive, emotional, trait, and Facebook jealousy and the use of Facebook for maintenance purposes.} \]

**Methods**

The goal of this study was to survey college students in a romantic relationship to gather information about Facebook use, jealousy, and Facebook relationship maintenance. The respondent was not required to be satisfied with her/his relationship at the time s/he filled out the questionnaire. Only one relational partner was permitted to fill out the questionnaire to prevent non-independence of data. Individuals were instructed to neither discuss nor show their survey to their partner.

**Sample**

A total of 189 college students completed an online survey. Two techniques were used to solicit respondents. First, members of the authors’ personal networks who were in college at the time of the survey were asked to complete the online survey, and those individuals were subsequently asked to solicit other individuals in a snowball technique. No incentives were provided to complete the survey. Second, instructors at other universities were approached to solicit their students to complete the survey. Those students were eligible to receive extra credit by entering a code developed by their individual instructor into the comments section of the survey. At no time did the researchers have knowledge of which code was assigned to which respondent. When the survey was closed, the list of codes was provided to the instructors and deleted from the data set.

The sample consisted of 46 men and 142 women (one respondent failed to report sex). All were college students. The average age of respondents was 21.36 (SD = 2.30, range 18–31). Most (88%) described themselves as White, not of Hispanic origin (N = 165), 5.3% described themselves as Black, not of Hispanic origin (N = 10), 5.3% described themselves as Hispanic (N = 10), and 1.0% described themselves as “other” (N = 3), with one person failing to indicate race. The majority (121) indicated that they were in a geographically close relationship, with 68 reporting
on a long-distance relationship. The average length of the relationship was 21.82 months \((SD = 20.76, range = 1–96\) months).

Because the focus of this study was on the use of Facebook and motives for the use of Facebook, we asked respondents to indicate how frequently they used Facebook during an average week. Respondents were relatively heavy users, with 24% \((n = 37)\) indicating they were almost always logged on, 57% indicating they checked their account several times per day \((n = 89)\), 17% checking Facebook every couple of days \((n = 26)\), and almost 3% \((n = 4)\) checking about once a week (the remainder failed to respond to the question).

**Instrumentation**

Regarding the use of Facebook for maintenance, using a 5-point Likert format, respondents were asked to indicate the extent to which they agreed with a number of different motives for using Facebook, including the use of Facebook for relationship maintenance \((1 = \text{strongly disagree}, 5 = \text{strongly agree})\). The mean score for using Facebook for maintenance was 3.58, \(SD = 1.1\). Although single-item measures of concepts are often criticized, Sackett and Larson \(1990\) suggest that there are a number of circumstances under which single-item measures are appropriate. One such instance is when the concept being measured is sufficiently narrow or is unambiguous to the survey respondent. In the case of this study, one of the central assumptions of a U&G perspective is that individuals consciously and actively select particular media channels to receive desired gratifications; as such, theoretically, the extent to which an individual uses Facebook for the purpose of relationship maintenance should indeed be instantly recognizable for the participants, making a single-item measure an appropriate operationalization. Further, from a psychometric standpoint, one of the central reasons to use a multiple-item measure rather than a single-item measure is that such measures provide data to compute reliability \(\text{(Diener, 1984)}\). To that end, we sought to ascertain an indicator of reliability of our single-item measure of the maintenance motivation by randomly dividing the sample in half and conducting an ANOVA using the two subsamples as the independent variable and score on the maintenance motivation item as the dependent variable. Results were nonsignificant \(F[1, 176] = 1.029, p = 0.312; M\) subsample 1 = 3.49 \([SD = 1.60]\), \(M\) subsample 2 = 3.66 \([SD = 1.06]\)), providing evidence of split-half reliability.

Moreover, given the possibility that individuals in long-distance relationships (LDRs) might use Facebook more frequently for maintenance than those in geographically close relationships (GCRs), ANOVA was used to ascertain whether the type of relationship might serve as a confounding variable. Results indicate no significant differences between the groups on their motivation to use Facebook for maintenance \(F[1, 176] = 2.95, p = 0.09\).

Finally, because the distribution of the use of Facebook for maintenance purposes was negatively skewed, relying solely on the labels of the Likert scale for classification of individuals into various categories of the maintenance motivation was inappropriate \(\text{(Preacher, Rucker, MacCallum, & Nicewander, 2005)}\). For this reason, a variable
was created called maintenance motivation. To prevent the problems associated with creating dichotomous groups, a modified quartile division was created. Unlike dichotomous grouping, this type of grouping allows for all of the data to be analyzed (Preacher et al., 2005). Specifically, individuals below one standard deviation of the mean (i.e., those who indicated that they strongly disagreed or disagreed with the statement that they used Facebook for relationship maintenance purposes) were assigned into the low maintenance motivation group \((n = 28)\). Those who scored within one standard deviation of the mean were assigned into the moderate maintenance motivation group \((n = 129)\), and those who scored beyond one standard deviation of the mean were assigned into the high maintenance motivation group \((n = 21)\). Note that 11 individuals failed to respond to this question.

Previously published scales were used to measure the additional variables of interest. Online maintenance was measured by Marmo and Bryant’s (2010) items for Facebook positivity and openness and Dainton’s (2013) measure of Facebook assurances. A 5-point Likert scale was used, with \(1 = \text{strongly disagree}\) and \(5 = \text{strongly agree}\). The Facebook positivity items included “I post on my partner’s wall to make him/her feel special,” “I send cheerful messages I think s/he will enjoy,” and “I respond in a timely manner when he/she sends me a Facebook message” (study \(\alpha = 0.86\), item \(M = 3.42, SD = 1.03\)). The Facebook openness items included “I update my profile information and status so he/she will stay up-to-date on my everyday life,” “I seek support by posting emotional (sad or exciting) news and hoping he/she will respond,” and “I post to share my thoughts and positions on current events with him/her,” (study \(\alpha = 0.79\), item \(M = 2.05, SD = 0.89\)). The Facebook assurances items included “I write, ‘I love you’ on my partner’s wall,” “I post future plans or events on my partner’s wall,” and “I comment on his/her profile so other users will see our connection,” (study \(\alpha = 0.75\), item \(M = 2.53, SD = 1.09\)).

Online monitoring was measured following the methods of Utz and Beukeboom (2011), who used four items from Muise et al.’s (2009) social media jealousy scale as representative of online monitoring (study \(\alpha = 0.85\), item \(M = 2.40, SD = 1.08\)). A 5-point Likert scale was used for the monitoring scale. These items are distinct from the remaining items, as they conceptually refer to behaviors rather than the experience of jealousy. Items included “I view my partner’s profile to monitor his/her interactions and watch out for his/her best interests,” “I pay attention to my partner’s updates as a way to know what he/she is doing without actually talking to him/her,” “I check out my partner’s ‘friends’ to make sure I know them all,” and “I check to see if my partner is keeping in touch with any past romantic or sexual partners.”

Regarding the jealousy variables, Guerrero, Eloy, Jorgensen, and Andersen’s (1993) modification of Pfeiffer and Wong’s (1989) emotional jealousy scale was used (study \(\alpha = 0.88\), item \(M = 4.22, SD = 1.57\)), as was Pfeiffer and Wong’s (1989) cognitive jealousy scale (study \(\alpha = 0.85\), item \(M = 2.74, SD = 1.45\)). Both scales use a 7-point Likert format, with \(1 = \text{never}\) and \(7 = \text{almost always}\). A sample item for emotional jealousy is “I feel jealous when my partner flirts with someone else.” A sample item for cognitive jealousy is “I am worried that some member of the opposite sex may be chasing after my partner.”
Facebook jealousy was measured by a shortened version of Muise et al.’s (2009) Facebook jealousy scale (which did not include the items used to measure online monitoring). Specifically, under the recommendation of Muise (personal communication, March 27, 2012), only those items referring to the experience of jealousy were included. Specifically, respondents were instructed, “after viewing your partner’s page, how likely are you to experience the following?” Responses ranged from 1 (very unlikely) to 5 (very likely) for the following five items: “Become jealous after seeing that your partner has added an unknown member of the opposite sex to Facebook,” “Be upset if your partner does not post an accurate relationship status on Facebook,” “Be suspicious about the private messages that your partner sends over Facebook,” “Worry that your partner will become romantically involved with someone on Facebook,” and “Experience jealousy related to Facebook,” (study $\alpha = 0.87$, item $M = 2.43$, $SD = 1.06$).

Trait jealousy was measured using Pines’ (1998) jealousy measure, which assumes that jealousy is a general disposition. Respondents were asked three questions, including: “compared to others, how jealous are you?” (1 = much less than others to 5 = much more than others), “to what extent have your romantic partners viewed you as jealous?” (1 = much less than others to 5 = much more than others), and “to what extent has your jealousy been a problem in your romantic relationships?” (with 1 = it has never been a problem to 5 = it has almost always been a problem). The measure was reliable (study $\alpha = 0.81$, item $M = 2.51$, $SD = 0.76$).

Results

Before testing the hypotheses or answering the research question we ran Pearson correlations between all of the variables of interest. Results are reported in Table 1.

Given the high correlations between the jealousy scales, we conducted a confirmatory factor analysis of the jealousy items. Maximum likelihood estimation was used with LISREL 8.8 (Öreskog & Sorbom, 2007). Based on the fit indices recommended

| Table 1 | Pearson Correlations Between Facebook Maintenance Variables, Jealousy Variables, Satisfaction, and Use of Facebook for Maintenance Purposes |
|------------------|------------------|------------------|------------------|------------------|------------------|
|               | FBPos | FBOp | FBAss | FBMon | Trait J | Emo J | Cog J | FB J |
| FB Pos |        |      |      |      |         |      |      |      |
| FB Op | .31*** |      |      |      |         |      |      |      |
| FB Ass | .56*** | .47*** |      |      |         |      |      |      |
| FB Mon | .15 | .46*** | .29*** |      |         |      |      |      |
| Trait J | .08 | .18** | .15** | .49*** |         |      |      |      |
| Emo J | .11 | .28*** | .11 | .53*** | .63*** |      |      |      |
| Cog J | -.14 | .14 | -.07 | .44*** | .45*** | .61*** |      |      |
| FB J | .13 | .33*** | .31*** | .69*** | .56*** | .52*** | .44*** |      |
| Motive | .24*** | .04 | .22** | -.04 | .15* | .04 | -.08 | -.01 |

Note. *** = $p < .001$, ** = $p < .01$, * = $p < .05$. |
by Kline (2011), model fit was assessed using the minimum fit function chi-square, Bentler comparative fit index (CFI), Steiger-Lind root mean square error of approximation (RMSEA), and the standardized root mean square residual (SRMR). Values of the CFI above 0.90 and values of the SRMR less than 0.10 indicate a reasonably good fit (Kline, 2011) whereas RMSEA values above 0.10 suggest a poor fit (Diamantopoulos & Siguaw, 2009). Results of the CFA indicated that the four-factor model fit the data reasonably well ($\chi^2 [98] = 230.53, p < 0.01$, $\chi^2/df = 2.56$, CFI = 0.97, SRMR = 0.07, RMSEA = 0.09). All items loaded significantly (factor loadings ranged from 0.63 to 0.86) on their respective factors at the $p < 0.01$ significance level.

Finally, to ascertain that our measure of using Facebook for maintenance purposes was not simply a measure of the frequency of Facebook usage, a correlation was run between self-reported use of Facebook and the Facebook maintenance motivation. The Pearson correlation was not significant ($r = -0.13$, $p = 0.09$), indicating that the two concepts are not isomorphic.

The first hypothesis predicted that the Facebook maintenance motivation would be associated with an increased use of Facebook maintenance behavior. Because the unequal sample sizes of the three groups violate the assumptions of ANOVA, the appropriate statistic is to use the Kruskal-Wallace test, a nonparametric statistic that does not require a normal distribution. The null hypothesis was rejected for three of the four tests. Results, reported in Table 2, indicate significant differences between the groups in the use of FB assurances, FB positivity, and FB monitoring. The results support the hypothesis for FB assurances and FB positivity. However, examination of the means suggests a curvilinear relationship for the use of online monitoring, with high maintenance motivation individuals performing the least amount of monitoring among the groups. As such, the hypothesis was not supported for monitoring.

The research question asked about the relationships among Facebook maintenance (including online monitoring) and the various types of jealousy. We answered the research question through the use of a canonical correlation; Nimon, Henson, and Gates (2010) recommended using a canonical correlation in order to evaluate the multivariate shared relationships between two sets of independent and dependent variable sets, as well as to minimize the probability of committing a Type I error. Results indicated significant relationships between the Facebook maintenance measures and reported jealousy (see Table 3), producing two linear combinations. Based on recommendations by Sherry and Henson (2005), only structure coefficients at the 0.45 level or above were interpreted.

The first combination had a canonical correlation of 0.72 ($\text{Wilk’s Lambda} = 0.42$, $F [16, 498.6] = 10.26, p < 0.001$). An examination of the structure coefficients suggests that when romantic partners experienced any of the four types of jealousy they were more likely to use Facebook openness (0.46) and online monitoring (0.99). The second combination had a canonical correlation of 0.30 ($\text{Wilk’s Lambda} = 0.87$, $F [9, 399.3] = 2.68, p < 0.005$). The results indicated that when romantic
partners experienced less cognitive jealousy (0.77) they performed more Facebook positivity (−0.67) and assurances (−0.91).

The second hypothesis predicted a positive relationship between the various forms of jealousy and the interval-level measurement of the maintenance motivation for using Facebook. Results of the Pearson correlations reported in Table 1 indicated just one significant correlation: The extent to which an individual used Facebook for maintenance purposes was positively correlated with trait jealousy, $r = 0.15$. Because the possibility exists for a curvilinear relationship, we also ran Kruskal-Wallace tests

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Mean (SD)</th>
<th>Significance</th>
</tr>
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<tbody>
<tr>
<td>Assurances</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>5.96 (2.66)</td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>7.81 (3.23)</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>8.52 (3.59)</td>
<td>.009</td>
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<tr>
<td>Openness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>5.63 (2.80)</td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>6.27 (2.66)</td>
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<tr>
<td>High</td>
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<td>.417</td>
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<tr>
<td>Positivity</td>
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<td>8.32 (2.76)</td>
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<td>Moderate</td>
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<tr>
<td>High</td>
<td>10.95 (3.02)</td>
<td>.000</td>
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<tr>
<td>Monitoring</td>
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<tr>
<td>Low</td>
<td>8.89 (4.68)</td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>10.01 (4.15)</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>8.00 (4.49)</td>
<td>.044</td>
</tr>
<tr>
<td>Trait jealousy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>6.79 (2.76)</td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>7.59 (2.23)</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>8.05 (1.69)</td>
<td>.111</td>
</tr>
<tr>
<td>Cog jealousy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>11.14 (5.72)</td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>11.24 (5.93)</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>9.00 (4.95)</td>
<td>.241</td>
</tr>
<tr>
<td>Emo jealousy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>15.68 (7.42)</td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>17.23 (6.05)</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>16.38 (5.97)</td>
<td>.738</td>
</tr>
<tr>
<td>FB jealousy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>11.23 (5.59)</td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>12.54 (5.04)</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>10.81 (6.19)</td>
<td>.148</td>
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</table>
of differences in the means for the three motivation groups (high maintenance motivation, average maintenance motivation, and low maintenance motivation). Results, reported in Table 2, failed to show a significant difference in the mean scores of the three groups. Accordingly, the hypothesis was not supported.

**Discussion**

The goal of this study was to use a more refined lens to investigate the relationships between Facebook use and relationship maintenance, with a particular focus on the motivations for using Facebook, online relationship maintenance behaviors, and various forms of jealousy. The results overall indicate that although a U&G approach helps to explain variations in the use of Facebook maintenance behaviors among college students, U&G is less effective in explaining the experience of jealousy associated with Facebook use.

We predicted variations in the use of Facebook maintenance behaviors such that individuals with a high maintenance motivation for using Facebook would report the most use of Facebook maintenance behavior, with those individuals with a low maintenance motivation for using Facebook reporting the least use of Facebook maintenance behavior. Results largely supported the prediction, with individuals high in the maintenance motivation for Facebook reporting significantly more use of online assurances and positivity. This is significant, as the maintenance behaviors of positivity and assurances have emerged frequently as the strongest predictors of relationship satisfaction (e.g., Stafford & Canary, 1991). Although in this study

<table>
<thead>
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<th>Variables</th>
<th>Function 1</th>
<th>Function 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>rs</td>
<td>rs</td>
</tr>
<tr>
<td>Set 1: Facebook maintenance</td>
<td></td>
<td></td>
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<tr>
<td>Positivity</td>
<td>.16</td>
<td>−.67</td>
</tr>
<tr>
<td>Openness</td>
<td>.46</td>
<td>−.23</td>
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<td>Assurances</td>
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<td>−.91</td>
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<td>Monitoring</td>
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<td>.08</td>
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<tr>
<td>Set 2: Jealousy</td>
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<td></td>
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<tr>
<td>Trait</td>
<td>.67</td>
<td>−.01</td>
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<tr>
<td>Emotional</td>
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<td>Cognitive</td>
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<td>.77</td>
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<td>Facebook</td>
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<td>−.22</td>
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<td>Canonical R2</td>
<td>.52</td>
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<tr>
<td>Redundancy Dep. Vars.</td>
<td>29.38</td>
<td>1.54</td>
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</table>

*Note.* Wilk's $\Lambda = .42; F (16, 498.61) = 10.26, p < .001. $rs$ = structure coefficient. Structure coefficients greater than .45 are in bold.
we did not assess the extent to which the online use of these behaviors predict relationship satisfaction, it appears that engaging in assurances and positivity, regardless of the communication channel used, can help an individual achieve his or her goal of relationship maintenance.

However, the results for the use of Facebook openness and online monitoring were less clear. First, it is intriguing that Facebook openness was the sole behavior not to vary in the way that a U&G approach might suggest. That is, theoretically, if openness is a maintenance strategy, then it should be used more often by people who have a maintenance motivation. However, previous research indicates that openness functions in multiple ways in relationship communication, not only serving to maintain relationships but also to develop or terminate relationships (Dindia, 1994), as well as to repair relationships or restore equity (Messman, Canary, & Hause, 2000). Accordingly, the results of this study may not suggest that engaging in Facebook openness does not contribute to maintenance attempts but, rather, that this behavior might be used to achieve other relational goals as well. Alternatively, it may simply be that openness, at least in the way it was originally conceptualized by Stafford and Canary (1991), does not lend itself to social media platforms such as Facebook. A final possibility is that although people believe openness to be a maintenance activity, engaging in disclosure for relational maintenance might be more of a cultural belief than a lived experience (see Stafford, 2003). Future research should investigate these possibilities.

Turning to the use of online monitoring, the results suggest a curvilinear relationship between having the goal of maintenance and engaging in monitoring behavior. Previous research has indicated that engaging in negative maintenance behaviors like spying indicates relational insecurity (Goodboy & Bolkan, 2011). As such, it may be that individuals at the extremes of endorsing Facebook maintenance experience less relationship insecurity, either because they are not seeking relationship security or because they are indeed secure in their relationship. As partial support for this proposal, Stewart et al. (2014) found that individuals experiencing more definitional and mutuality uncertainty engaged in more Facebook monitoring. Future research might seek to probe the way that relationship security influences the development of goals such as relationship maintenance.

Our research question sought to more closely examine the relationships between Facebook maintenance activity and various forms of jealousy. Previous research has indicated that Facebook activity is related to trait jealousy (Muise et al., 2009), and that it is related to Facebook-specific jealousy (Stewart et al., 2014; Utz & Beukeboom, 2011). Although research has not yet linked the relationship between Facebook maintenance behaviors and cognitive or emotional jealousy, previous research has found significant, negative correlations between general maintenance activities and both cognitive and emotional jealousy.

The results provide a clearer picture of the relationships between specific online behaviors and jealousy. It appears that two of the Facebook maintenance variables used in this study—openness and monitoring—are positively associated with all four forms of jealousy. Guerrero and Andersen’s (1998) componential model of jealousy
can shed some light on these results. This model suggests that the experience of jealousy is related to specific goals, which in turn lead the jealous individual to engage in communicative responses to jealousy. Openness is conceptually related to three of the behaviors that Guerrero, Andersen, Jorgensen, Spitzberg, and Eloy (1995) identified: negative affect expression, integrative communication, and distributive communication, all of which refer to disclosure. Similarly, monitoring is conceptually related to the surveillance strategy identified by Guerrero et al. (1995). Taken together, it appears that both monitoring and openness might be used as a way to cope with jealousy, regardless of which communication channel is used.

Conversely, the results of this study indicate that individuals experiencing cognitive jealousy are less likely to use Facebook positivity and assurances. As described earlier, cognitive jealousy is defined as suspicious thoughts or worries about third-party threats to the relationship (Pfeiffer & Wong, 1989). Cognitive jealousy is more strongly correlated with relationship dissatisfaction than are the other forms of jealousy (Andersen, Eloy, Guerrero, & Spitzberg, 1995). It appears that worries about the relationship may inhibit the use of pro-social maintenance behaviors such as assurances and positivity.

The last hypothesis predicted a positive relationship between the maintenance motivation for Facebook and the experience of jealousy. The hypothesis was not supported, nor were curvilinear relationships evident. Although Guerrero and Afifi (1998, 1999) found that one of the primary goals of jealous individuals is relationship maintenance, it seems that jealous individuals in general do not turn to Facebook as a means to achieve that goal. Of course, there are a number of other goals that Guerrero and Afifi identified as related to the experience of jealousy, including uncertainty reduction and bolstering self-esteem. It would be of interest to assess the extent to which jealous individuals turn to Facebook to achieve these goals. Further, we relied on the componential model to establish that jealousy experience is the trigger for establishing goals (Guerrero & Andersen, 1998). It may be instead that seeking particular gratifications from Facebook is what leads to emotions, rather than the other way around. For example, if an individual uses Facebook to gather information about the partner, it might be the information that is gathered via Facebook that triggers the experience of jealousy.

There are a number of limitations of this study. First, the sheer number of correlations run to test the two hypotheses increases the chance of a Type I error. The use of a Bonferroni correction for correlation tables is controversial (Nakagawa, 2004), and of course, the use of a correction increases the risk of Type II errors. Accordingly, we did not make any adjustment for the number of correlations run. Second, we used a single-item measure of the motivation for using Facebook for maintenance purposes. It is possible that using a multiple-item measure might provide more variability in responses and allow for a more nuanced analysis of the role of motivations in the use of Facebook. We also created three categories of the maintenance motivation. Although this attenuates the problems associated with creating dichotomous groups, translating continuous data into categorical data is not ideal (Preacher et al., 2005). Third, by relying on the pre-established measures of Facebook maintenance,
a number of other ways that individuals use Facebook for maintenance purposes may have been overlooked. Dainton (2013), for example, found that the four Facebook maintenance behaviors adopted in this study predicted very little of the variance of relationship satisfaction. Further, Bryant and Marmo (2009) found that Facebook use alone was not sufficient for maintaining close romantic relationships; their respondents indicated that Facebook merely supplemented other forms of communication. As such, and as Ellison et al. (2007) suggested, the power of Facebook in maintaining relationships might be the extent to which social media allows for the maintenance of “weak ties.”

To summarize, the results of this study make clear that there are strong relationships between Facebook maintenance behaviors and the experience of jealousy. As such, this study augments existing research into the relationship between Facebook and jealousy, indicating that specific behaviors enacted on Facebook might function to explain the connection between these variables. On the other hand, a focus on using Facebook for maintenance gratifications was not successful in explaining why these links might exist. Nevertheless, it seems likely that a more nuanced and thorough U&G focus might indeed provide a means to understand why engaging in Facebook maintenance activity and jealousy are related. Future research will need to investigate this, as well as other potential explanatory mechanisms, to account for the strength of these relationships.

References


